Agriculture

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Foreign Agriculture 1990-91

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United States Department of Agriculture

Foreign Agricultural Service

August 1991

Foreign Agriculture 1990-91

This publication is designed for U.S. exporters, farm organizations, and others who need a quick, concise guide to foreign agriculture. *Foreign Agriculture 1990-91* is the second edition of this reference guide, first published in 1989.

"Country Profiles" are presented on more than 70 countries. Each profile provides key information and data on the country's agricultural production, policies, and trade. An expanded "Atlas of World Agriculture" follows the profiles. Maps and charts present a global picture of production and trade for major commodities— and also look at some demographic and economic variables related to food demand.

Notes and acknowledgments

Foreign Agriculture 1990-91 was produced by the FAS Information Division. Country profiles were prepared by FAS agricultural counselors, attachés, and specialists serving at embassies and trade offices around the world. The publication also draws on data and expertise provided by the FAS headquarters staff in Washington D.C., the Economic Research Service, and the World Agricultural Outlook Board of the U.S. Department of Agriculture. Some maps in this volume are reprinted, with permission, from *Goode's World Atlas*, courtesy of Rand McNally & Company, and from *The World Bank Atlas 1990*, courtesy of The World Bank.

The updated contents of this edition reflect analysis and data available as of early 1991. Because of lags in statistical reporting, 1990 data could not be obtained for many countries. Data sources and the availability of reliable statistics vary considerably by country.

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Algeria

A

Profile of agriculture

Agriculture accounts for 7 percent of Algeria's gross domestic product and employs nearly a quarter of the labor force. The country is divided into three distinct geographic regions that roughly parallel the Mediterranean Sea.

The fertile northern coastal plain is characterized by mild, wet winters and hot, dry summers. This region—the one best suited to agriculture—includes only 3 percent of the total land area.

The relatively mountainous high plateau between the coastal plain and the desert experiences cold winters and hot summers and is suitable for livestock farming.

The Sahara Desert has a harsh, dry climate and is not inhabited or cultivated, except for oases.

Agricultural production can vary enormously from one year to the next in this arid and semiarid climate.

Poor irrigation and losses of arable land to desert encroachment compound drought-related problems. Less than 1 percent of the agricultural land is irrigated.

Erosion is a major problem in the north, where significant amounts of topsoil are carried into the sea each year. The problem has been aggravated by forest fires and overgrazing.

Wheat and barley are the most important crops. They are planted on about 40 percent of the agricultural land and account for 20 to 25 percent of the value of agricultural output.

South of the grain regions are the rangelands that phase into the Sahara Desert. The open range provides pasture for sheep, the principal livestock. Sheep spend the winter on the open range and then are herded north to the cereal zone in the spring and summer, where they graze the stubble left from the wheat and barley harvests. Most of the cattle are in the more humid areas. The Government has established feedlots, dairies, and broiler and egg farms, but output is relatively low. Livestock products contribute about a fourth of the total value of agricultural output.

Algeria is a middle-income country with an annual per capita income estimated at $2,360. With 25.6 million people, Algeria has one of the fastest growing populations in the world, increasing by 2.9 percent per year.

Agricultural Production

	1988	*1989*
	thous. metric tons	
Crop production		
Barley	390	540
Citrus	277	312
Dates	196	200
Fodder	635	700
Olives	143	125
Potatoes	899	1,050
Table grapes	93	125
Vegetables	2,420	3,100
Wheat	1,150	1,150
Wine grapes	605	175

	1989
	mil. head
Livestock numbers	
Cattle	1.4
Goats	2.2
Poultry	30.0
Broilers	14.0
Layers	16.0
Sheep	16.4

	1988	*1989*
	thous. metric tons	
Animal product output		
Beef	81	88
Eggs [1]	3.2	3.4
Lamb and mutton	114	116
Milk	970	970
Poultry meat	225	258

[1] *Billion eggs.*

Algeria at a Glance

Population (1990): 25.6 million
Urban population: 50%
Population growth rate: 2.9%
Per capita income (1989): $2,360
Total land area: 2,381,740 square kilometers; 3% crop use, 16% other agricultural uses
Major crops: Cereals, citrus, vegetables, olives, dates, wine, table grapes
Livestock sector: Poultry, dairy and beef cattle, sheep, goats
Leading agricultural exports: Dates, fruits, vegetables, wine
Leading agricultural imports: Grains, pulses, dairy products, edible oils, protein meals, hides and skins, cotton, tobacco, tallow, wood
Agricultural imports as a share of total imports: 32%
U.S. share of total agricultural imports: 22%
Percent of labor force in agriculture: 24%
Membership in economic or trade organizations: IBRD, IMF, OPEC

Production highlights

Agricultural production remained low in 1989 despite reforms introduced by the Government to stimulate production. Low average yields were caused primarily by severe drought, inadequate use of seeds and fertilizers, and shortages of farm equipment and funding for research.

Because of the rapid increase in population, the 3-percent growth rate in agricultural production is not suffi-

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Barley	69.5	43
Corn	223.9	93
Cotton	54.9	55
Hides and skins	35.5	38
Paper pulp	38.6	50
Pulses	96.8	13
Rice	15.6	84
Soybean meal	143.1	98
Tobacco	26.9	31
Wheat	746.6	37
Wood	263.0	9
All agricultural products[2]	3,086	22

[1] *Values are shown in U.S. dollars at U.S. $1=7.51 Algerian dinars.*
[2] *Includes products not listed.*

cient to prevent an increasing food gap. Self-sufficiency levels for cereals have dropped from 90 percent in 1962 to about 20 percent in 1989, forcing Algeria to rely largely on imports to meet its requirements for cereal and feed grains.

Production of fresh vegetables such as potatoes, carrots, and legumes is generally sufficient, although potatoes were imported at the end of 1990.

Wine grape production decreased from 2.6 million hectoliters in 1980 to 175,000 in 1989. Table grape production, however, has increased fourfold over the past 20 years.

Citrus production has declined from a high of 517,000 tons in 1974 to 312,000 in 1989. For the first time in its history, Algeria imported 60,000 tons of citrus from Morocco at the end of 1990.

Date production has remained constant at about 200,000 tons a year for the past 10 years, but insect infestation is still a major problem.

Farm and food policy

A decline in oil export earnings and organizational problems in the agricultural sector have forced Algeria to reorient its agricultural structure from large state-operated farms to small privately operated units. The Government hopes that the new system of cooperatives and individually owned farms will produce more food and reduce the need for imports.

Other policies that affect farm output include economic incentives to increase food production.

The major agricultural goal is to decrease food imports and increase domestic production. Other goals include developing seed varieties better suited to the climate; developing arable land in the south and on the high plateau; promoting production of grains, pulses, and tomatoes; and improving productivity in the livestock sector to increase sheep, dairy, and beef cattle herds.

Imports and exports

Algeria is a net agricultural importer, with purchases of nearly $3.1 billion in 1989 versus sales of $51.5 million.

Food imports required 30 percent of total export earnings in 1989. Major agricultural imports included grains, pulses, dairy products, wood, edible oils, protein meals, tallow, cotton, tobacco, and hides and skins. The U.S. share of total agricultural imports was 22 percent, up from 13 percent in 1987 and 8 percent in 1986.

Priority is given to imports of raw materials such as cotton, and hides and skins, which are then manufactured into exportable products.

Major agricultural exports by value include wine, dates, and fruits and vegetables. After years of discouraging the production of wine for religious reasons, the Government now promotes it to increase export earnings.

Some 3,500 tons of dates were exported in 1989, with earnings of $20 million. The volume, however, was well short of the export goal of 8,000 tons a year.

Exports of fresh vegetables grew from zero in 1984 to $4 million in 1988. Citrus exports in 1989 were insignificant because of bad weather; however, earnings from processed fruits and vegetables were $5.5 million.

Trade policy and prospects

Algeria's imports in most cases are handled by Government agencies. However, in 1988 and early 1989, changes in Algerian law were made to give Government and private enterprises greater latitude in importing essential items. Since that time, the country has increased feed grain imports for the livestock and poultry industry, and raw cotton imports to supply the local textile industry.

For most items, however, state trading, long-term barter agreements, and strict animal health requirements remain as barriers to expanded imports. In addition, because of its weak foreign exchange position, heavy debt burden, and need to finance basic agricultural imports, Algeria will continue to depend heavily on credit.

The United States remained competitive in the Algerian import market in 1989 through the use of U.S. Government export subsidies and export credit guarantee programs. The main competition is from the European Community, which offers extensive subsidies.

Export opportunities for U.S. firms include wheat, barley, corn, rice seed, vegetable oils, pulses, protein meals, wood products, leaf tobacco, cotton, tallow, cheese, powdered milk, butteroil, live animals and genetic materials, and hides and skins. ■

Argentina

A

Profile of agriculture

With its temperate climate, Argentina produces, exports, and imports many of the same products as the United States.

The country is a major exporter of oilseed byproducts, wheat, corn, soybeans, and livestock products (mostly beef and hides). Horticultural exports include citrus, deciduous, and dried fruit.

For the past 45 years, Argentine economic policies have taxed the competitive agricultural export sector and subsidized the manufacturing sector, which is largely closed to international trade. As a result, large supplies of domestically produced food are available to Argentina's 33 million citizens, who consume a diet rich in protein and low in cost. Food imports are relatively small.

Agricultural Production

	1988/89	*1989/90*[2]
	thous. metric tons	
Crop production[1]		
Corn	5,000	5,200
Cotton lint	280	300
Fruits	5,980	[3]
Potatoes	2,210	[3]
Sorghum	1,400	2,000
Soybeans	6,500	10,750
Sugarcane	13,940	10,600
Sunflowerseed	3,200	3,800
Tobacco	80	70
Wheat	8,400	10,150

	1989	*1990*[2]
	mil. head	
Livestock numbers		
Cattle		
Beef	48.5	48.5
Dairy	2.3	2.1
Hogs	2.5	2.1
Horses	3.2	3.4
Poultry	36.2	36.3
Sheep	29.3	28.6

	thous. metric tons	
Animal product output[1]		
Beef and veal	2,600	2,650
Cheese	260	275
Eggs[4]	3,350	3,650
Hides	304	305
Milk		
Fluid	6,725	6,500
Dry	160	130
Poultry meat	315	325
Wool	151	148

[1] *Years vary by commodity.*
[2] *Estimated.*
[3] *Not available.*
[4] *Million eggs.*

Production highlights

Generally favorable weather boosted 1989/90 production of all five major crops—soybeans, wheat, corn, sunflowerseed, and sorghum—above 1988/89's drought-reduced levels.

Liquidation of cattle herds continued in 1990 in response to higher production costs and taxes, low meat prices, and lack of credit opportunities. Beef prices were forced down to their lowest level since 1985 because of a strong recession and an overvalued local currency, which slowed exports during the last 4 months of the year.

Although feed costs declined in 1990, the pork and poultry sectors operated below capacity as a result of stiff beef competition and slack demand.

Milk production dropped in 1990 because of increased expenses, lower international prices, and hyperinflation. Milk producer associations are in conflict with the Government and industry over the level of milk prices and terms of payment.

Farm and food policy

After years of tight controls, the Government is attempting to expand production and exports by converting Argentina to a free-market economy. However, dismantling the large, inefficient structure built up over the past 45 years will take time.

In December 1989, the Government freed the exchange rate, leaving only high export and consumption taxes to generate revenue.

Argentina at a Glance

Population (1990): 32.9 million
Urban population: 86%
Population growth rate: 1.5%
Per capita income (1990): $2,564
Total land area: 2,758,829 square kilometers; 9% arable
Major crops: Soybeans, wheat, corn, sunflowerseed, grain sorghum, flaxseed
Livestock sector: Beef and dairy cattle, poultry, sheep, horses, hogs
Leading agricultural exports: Oils and meals, grains, beef, animal products, fruits and products, oilseeds, dairy products, wool, vegetables, cotton
Leading agricultural imports: Coffee, fruits, wood, cocoa, cotton, resins, seeds, essential oils
Agricultural imports as a share of total imports (1989): 5.5%
U.S. share of total agricultural imports: 11%
Percent of labor force in agriculture: 12%
Membership in economic or trade organizations: ALADI, GATT, IBRD, IMF, OAS

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cocoa	19.3	[2]
Coffee	48.4	0
Cork	7.7	[2]
Cotton	13.8	[2]
Essential oils	7.8	37
Fats and oils	6.5	35
Fruits	24.6	[2]
Live animals	5.0	35
Resins, pectins, agar	12.1	11
Seeds	11.0	62
Spices	5.7	0
Wood	23.6	2
All agricultural products[3]	230.2	11

[1] *Values are shown in U.S. dollars at U.S.$1=396 australes.*
[2] *Less than 0.5%.*
[3] *Includes products not listed.*

In mid-1990, production costs increased sharply as the local currency became overvalued, and farm profit margins were eroded. Complaints by farm leaders forced the Government to reduce and, in some isolated cases, eliminate agricultural export taxes.

The Government's long-term farm policy is to eliminate all export taxes. The outcome of this policy will depend on the success of alternative tax measures such as the value-added tax and user fees.

Imports and exports

Argentina enjoys a large agricultural trade surplus. In 1989, exports totaled $5.7 billion versus imports of $230 million.

Exports of agricultural products dropped 5 percent in 1989, to $5.7 billion, mainly because of declines in oilseeds, oilseed byproducts, wool, and cotton. Vegetable oils and meals represented 38 percent of all agricultural exports. Grains, beef, vegetables, and dairy products increased their export shares.

Argentina's exports to the United States in 1989 dropped to $372 million. Leading commodities were beef, leather, fruit and juices, sugar, vegetables, dairy products, and tobacco.

Imports of agricultural products in 1989 were at their lowest level since 1976. Major imports were coffee, fruits, wood, cocoa, cotton, resins, and seeds.

Agricultural imports from the United States declined slightly in 1989 to $26 million. Most of the decline was in seeds, cotton, and fruits.

Major U.S. exports by value were seeds, grains, essential oils, fats and oils, breeding livestock and poultry, and semen.

Trade policy and prospects

Argentina has protected its domestic agricultural sector with relatively high import tariffs, inspection fees, and various registration systems.

Because Argentina is a major producer and exporter of many agricultural products, the import market is small, with limited expansion potential for agricultural commodities.

The areas of breeding livestock and poultry, semen, and seed continue to offer the best prospects for U.S. exports. Argentine interest in U.S. Government export credit guarantee programs has increased and should help boost U.S. sales. A $2 million export credit guarantee program for animal genetics was approved for fiscal year 1991.

Argentina has relatively few policies to promote agricultural exports. The most visible program is the use of differential export taxes to promote the processing of raw materials. The Government places a high tax on exports of raw materials (especially oilseeds such as soybeans, sunflowerseed, and flax) and a much lower rate on the processed products (such as oilseed meal and oil).

Differential export taxes are also used for commodities such as wool, cotton, fruit products, and meat. An export ban on raw hides serves the same purpose for leather goods.

Argentina is a member of the Latin American Integration Association (ALADI), which promotes trade among the 11 member countries by offering preferential tariffs. In addition, the country is planning to establish a free-market zone with Brazil, Uruguay, Paraguay, and Chile.

As an active member of the Cairns Group in the Uruguay Round of the GATT Multilateral Trade Negotiations, Argentina is closely watching the 1992 integration plan of the European Community. ■

Australia

A

Profile of agriculture

Most Australian farms raise both wheat and sheep or beef cattle, or all three. The average size of the 171,000 farms is 2,800 hectares. Only 18 percent are larger than 2,000 hectares and 19 percent are smaller than 200 hectares. Less than 6 percent of the labor force works on farms.

Wool is the top agricultural product by value, followed by beef. The country also has a large dairy industry. Wheat is the major crop. Coarse grains (particularly barley), cotton, sugarcane, and fruits and vegetables are other important commodities.

Agricultural Production

	1988/89	*1989/90*
	thous. metric tons	
Crop production		
Apples	328	315
Barley	3,306	4,096
Citrus	515	649
Cotton	286	305
Grapes	661	584
Oats	1,867	1,638
Potatoes	1,049	1,166
Rice	749	923
Sorghum	1,283	920
Sugarcane	28,073	27,622
Wheat	14,060	14,121
	mil. head	
Livestock numbers		
Cattle		
Beef	19.89	20.10
Dairy	2.55	2.50
Hogs	2.67	2.61
Sheep	164.9	173.0
	thous. metric tons	
Animal product output		
Beef and veal	1,492	1,678
Butter	96	106
Cheese	190	175
Lamb	290	295
Milk [1]	6,291	6,262
Mutton	254	333
Pork	308	317
Poultry meat	406	419
Wool	959	1,100

[1] *Million liters.*

Production highlights

Agricultural production in 1990 remained at high levels; however, falling world prices for most agricultural products hurt farm income. Although the gross value of farm production rose less than 5 percent in 1989/90, the net value fell by 8 percent. This decline followed 4 years of constant increases.

Wool production in 1989/90 was expected to be up some from the previous year, but prices were expected to be markedly lower because of slack world demand and the stockpile of over 5 million bales of wool held by the Australian Wool Corporation. Because of this oversupply, the sheep industry was faced with slaughtering as many as 20 million animals in the national flock of 180 million head.

As these sheep were to be destroyed and would not have any salvage value, the enforced slaughter was not expected to have a substantial impact on the sheep meat sector. Production of both lamb and mutton was expected to rise by about 5 percent in 1990/91, with prices remaining firm. Lamb for export was in demand and commanded a premium. However, exports of live sheep were expected to fall as a result of receiving problems in the major markets in the Middle East.

Cattle slaughter is expected to increase marginally in 1990/91; however, because of lower weights, beef and veal production is expected to fall marginally. About 50 percent of this production is for the export market, so a slight decline in domestic consumption is expected. The United States currently receives about 50 percent of Australia's exports of beef and veal, but the industry is concentrating heavily on expanding the market in north Asia.

Wheat production reached about 15.6 million metric tons in 1990/91. Prices on the world market were down sharply because of a record world harvest, and prices received by Australian farmers were at their lowest real levels in 50 years. The 1990/91 returns to

Australia at a Glance

Population (1989): 16.8 million
Urban population: 83%
Population growth rate: 1.6%
Per capita income (1988): $10,475
Total land area: 7,682,300 square kilometers; 6% crops, 55% livestock production
Major crops: Wheat, sugarcane, barley, cotton, grapes, potatoes, sorghum, oats
Livestock sector: Wool, beef cattle and calves, sheep, dairy cattle, hogs, poultry
Leading agricultural exports: Wool, wheat, meat, sugar, cotton, barley, rice
Leading agricultural imports: Forest products, leather and furskins, tobacco, whiskey, nuts, fish products
Agricultural imports as a share of total imports: 6%
U.S. share of total agricultural imports: 14%
Percent of labor force in agriculture: Less than 6%
Membership in economic or trade organizations: APEC, Cairns, GATT, OECD

Value of Agricultural Imports, 1989/90

	Total imports	*U.S. share*
	$ mil. [1]	*%*
Selected products		
Fish products	87.5	[2]
Forest products	250.0	26
Leather and furskins	79.7	1
Nuts	61.5	32
Tobacco	58.6	43
Whiskey	50.0	23
All agricultural products [3]	1,489.8	14

[1] *Values shown in U.S. dollars at U.S. $1=Australian $1.28.*
[2] *Less than 1 percent.*
[3] *Includes products not listed.*

wheat growers will not cover the cost of seeding the 1991/92 crop.

Increased area in irrigated cotton is expected to boost cotton production over the next 5 years by about 30 percent. Overall acreage is expected to remain near current levels but will shift from dryland (which has been extremely variable) to irrigated areas. Cotton prices are expected to remain fairly stable during this period.

The sugar industry is in its first significant expansion since 1980/81. Since the beginning of 1989, growers have had the opportunity to expand their acreage, first by 5 percent and then by 8 percent. Although some cane from this additional acreage will be harvested in the 1991/92 season, most will come into production in 1992/93.

Grape production is expected to increase in 1990/91, and continued increases are expected over the next 5 years. Wine production is estimated to be a record 45 million liters in 1991, and export interest is strong.

Farm and food policy

Over the past 5 years, Australia has moved from being one of the most regulated agricultural economies to one almost free of Government interference with the market. This deregulation has been painful and has not been universally applauded, but it has placed the country in an advantageous position to compete in world markets, when and if domestic and export subsidies are removed.

Australia uses national and state corporations, or marketing boards, to oversee producer price stabilization programs and to unify the export marketing and promotion of many agricultural commodities, including wheat, rice, sugar, meat, wool, dairy products, eggs, apples, pears, canned fruit, dried fruit, honey, wine, and tobacco. Price stabilization pools and market promotion are largely financed by producers.

The principal subsidy to Australian farmers is the two-price system operated by the various marketing boards under which income is transferred from consumers to producers. Research programs, tax concessions, adjustment assistance, disease control, local content schemes, disaster relief, and marketing services also provide significant assistance to producers.

Imports and exports

Australia enjoys a very large surplus in its agricultural trade and exported $12.2 billion worth of agricultural products in 1989/90, versus imports of $1.5 billion.

Wool, grains, and beef account for over two-thirds of the value of Australia's agricultural exports. About four-fifths of the wheat and barley produced is exported, as is almost three-quarters of the rice, sugar, and cotton. Half the beef and almost all the wool production is exported. Australia is the world's largest exporter of wool and beef and a major supplier of wheat, barley, rice, cotton, and sugar.

Exports of these major commodities over the next 2 years are not expected to change materially. Wool and wheat are expected to recover from low 1990 levels, and beef exports are expected to continue to grow, with north Asia surpassing the United States as the principal market.

Exports of agricultural products to the United States reached $1.25 billion in 1989/90. Red meat exports, the largest sales category, totaled $800 million. Other important items were sugar, wool, dairy products, fish, fruits, and vegetables.

Major imports in 1989/90 included forest products, fish products, leather and furskins, tobacco, and whiskey.

Australia imported $205 million worth of agricultural products from the United States, chiefly forest products, tobacco, and whiskey.

Trade policy and prospects

Many imports are prohibited or severely limited by strict plant or animal health regulations. Livestock imports are limited to breeding animals and genetic materials, and there are practically no meat imports. Plant quarantine regulations keep out many horticultural products, such as grapes, apples, pears, and avocados.

Internationally, Australia continues to play a major role in the effort to reform agricultural trade. As a leader in the 13-nation Cairns Group, the country has actively campaigned for abolishing or reducing subsidies, both domestic and export, in agriculture. ■

Austria

Austria at a Glance

Population (1990): 7.6 million
Urban population: 64%
Population growth rate: 0.1%
Per capita income (1989): $16,590
Total land area: 84,000 square kilometers; 17% crop use, 24% animal production, 1% other agriculture
Major crops: Grains, fruits, vegetables
Livestock sector: Dairy and beef cattle, hogs, poultry
Leading agricultural exports: Beef, cheese, live cattle, wheat, bread and biscuits, concentrated apple juice, coffee
Leading agricultural imports: Forest products, fruits, coffee, vegetables, oilseed cake and meal
Agricultural imports as share of total imports: 8%
U.S. share of total agricultural imports: 3%
Percent of labor force in agriculture: 8%
Membership in economic or trade organizations: EFTA, GATT, OECD

Profile of agriculture

Austrian farms, like those of other mountainous West European countries, are small and fragmented, and their products are relatively expensive. Austrian farmers provide about 80 percent of domestic food requirements.

Over half of all Austrian farms are part-time operations. Agriculture and forestry account for 3 to 4 percent of Austria's gross domestic product.

Dairy products, cattle, and grains are the three major commodities produced, although Austria also grows a wide range of other temperate crops.

Dairy farming and the production of breeding cattle are carried out mainly in hilly and mountainous areas around the Alps. Cattle fattening is largely done in the foothills and the lowlands where corn for silage and grain is grown.

Austria's grain belt is the region around Vienna. Until the mid-1970's, relatively large imports were necessary. However, a slight increase in area and a rapid rise in yields boosted production beyond the point of self-sufficiency, and Austria has become a net grain exporter. Wheat, corn, and barley are the three major grains produced.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production [1]		
Apples	255	268
Barley	1,422	1,512
Corn	1,491	1,544
Pears	47	41
Rapeseed	96	85
Sugar beets	2,640	2,334
Sunflowerseed	73	53
Wheat	1,363	1,403
	thous. head	
Livestock numbers [2]		
Cattle		
Beef	633	636
Dairy	954	951
Chickens	13,589	14,145
Hogs	3,874	3,773
Sheep	256	289
	thous. metric tons	
Animal product output		
Beef and veal	222	213
Butter	42	41
Cheese	84	88
Eggs [3]	1,757	1,695
Milk	3,333	3,331
Pork	399	404
Poultry meat	75	75

[1] *Denotes year harvested.*
[2] *As of December each year.*
[3] *Million eggs.*

Production highlights

The Simmental breed accounts for 80 percent of Austrian cattle. In 1989, about 619,000 slaughter cattle and 169,000 slaughter calves were produced. Although most of the veal was consumed domestically, a third of the slaughter cattle were exported, mainly as meat. In addition, 86,000 breeder cattle were exported.

Austria's production of wheat and corn declined in 1989, but barley production rose. Sugar beet production has been increasing in recent years, the result of favorable prospects for sugar prices.

Because Austria has a deficit in oilmeals and vegetable oils, it intends to expand the production of oilseeds, mainly at the expense of grain. In June 1989, the first oil mill went into operation. Another small mill, intended to produce fuel oil from rapeseed, went into operation in October 1990.

Apples are the main fruit produced in Austria. Output in 1990 was 268,000 tons, with fall-winter apples (particularly golden delicious) making up 87 percent of the total. In addition, large volumes of cider apples are produced and processed into juice.

After the large output in 1988, wine production dropped to 2.6 million hectoliters in 1989. As in previous years, about 80 percent was white wine and the rest was red and rosé.

Farm and food policy

Austrian agricultural policy emphasizes self-sufficiency. Crop production is planned through a system of price

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil. [1]	*%*
Selected products		
Coffee, tea, cocoa, spices	396	0
Feeds, miscellaneous	182	2
Forest products	555	3
Fruits and products	457	4
Grains and products	131	8
Vegetables and products	196	1
All agricultural products [2]	3,064	3

[1] *Values are shown in U.S. dollars at U.S.$1=13.31* schillings.
[2] *Includes products not listed.*

checkoffs, production controls, and subsidies.

Austria has some of the highest agricultural prices in Europe to help maintain farm income. Producer prices are set for a number of basic commodities, but price controls also apply at the wholesale and retail levels for several products.

One central policy goal is to protect a large proportion of small mountain farms, many in the economically weak area at the eastern border. For this reason, a shift to a more market-oriented agricultural system seems unlikely.

Austrian livestock policy discourages large-scale production. However, even with restrictions, overproduction of beef and pork remains a problem.

Price supports for grains and dairy products have resulted in surplus production. To reduce these surpluses, the Government buys up milk production quotas and is encouraging producers to shift grain area to alternative crops, especially oilseeds.

The Government introduced new regulations to make Austrian dairy products more competitive with those of other European producers. Based on these regulations, which permit more independent action by dairies, practically all dairy cooperatives merged into one company in 1990. Austria intends to reduce its overcapacity and close down obsolete dairies.

Expanding the use of crops as an energy source is also viewed as a possible solution to surplus problems.

Environmental protection has become one of the dominant issues on the agricultural policy agenda. Current concerns range from contamination of ground water by farm chemicals to the preservation of forests from industrial and automobile emissions.

Imports and exports

Austria is a net importer of agricultural products, buying $3.1 billion worth in 1989 versus exports of $2.5 billion.

The European Community (EC) is Austria's major trading partner. Austria also maintains close relations with Eastern Europe and often subsidizes sales of surplus commodities to that area.

Major imports in 1989 included forest products; fruit and fruit products; coffee, tea, cocoa, and spices; vegetables and products; feeds—mainly oil meals; and grains and grain products.

In 1989, Austrian imports from the United States totaled $89 million. The principal items were forest products, $18 million; fruits and fruit products (especially fresh and dried fruit), $16 million; grains and grain products, $11 million; beef and veal, $8 million; tobacco, $8 million; and cotton, $7 million.

Austrian agricultural exports to all markets totaled $2.5 billion in 1989. Principal exports were fresh and frozen beef, $140 million; cheese, $110 million; live cattle, $82 million; wheat, $81 million (with practically all going to Eastern Europe); fruit juice, $79 million; bread and biscuits, $69 million; nonalcoholic beverages, $63 million; dry milk, $57 million; chocolate products, $56 million; hides and skins, $40 million; corn, $35 million; coffee, $48 million; and beer, $16 million.

Major exports to the United States in 1989 included cheese, apple juice, bakery products, chocolate, and beverages.

Trade policy and prospects

Austria is a highly developed and protected market. Export subsidies and import restrictions, such as tariffs and licenses, for major farm products are used extensively to protect domestic producer prices. Imports of grain, dairy and meat products, and wines require an import license. Of the major agricultural items, only imports of rice, oil meals, and vegetable oils are unrestricted.

Some Austrians are interested in becoming part of the EC, while others oppose membership. Within the agricultural sector, there are concerns that membership would hurt Austria's small family farmers. ■

Bangladesh

B

Profile of agriculture

Although Bangladesh is experiencing industrial growth and urbanization, its economy remains primarily agrarian. Agriculture still produces 47 percent of the gross domestic product (GDP) and employs 61 percent of the labor force. Rice alone accounts for about 25 percent of the GDP.

The land is extremely rich, but the country's fast-growing population must contend with uncertain monsoon rains, frequent floods, and occasional typhoons in the struggle to obtain a livelihood.

Most of the country lies in an alluvial plain only 1 to 3 meters above sea level, which means that Bangladesh is extremely vulnerable to severe floods during the monsoon season. Cropping patterns are largely determined by the depth, timing, and expected duration of annual floods. About 30 percent of the total cultivable land is in areas that flood more than 90 centimeters (3 feet) a year.

Landholdings are extremely small and fragmented, and farmers and family members consume most of what they produce. Around 90 percent of the market food surplus comes from only 30 percent of the farmers who tend to operate on plots of over 2.5 acres.

Field crop production is the dominant agricultural activity. The livestock and poultry sector together contribute 6 percent to the GDP and employ approximately 20 percent of the population. Exports of hides and skins account for about 10 percent of the country's total foreign exchange earnings.

Most cattle are kept by farm households and fed crop residues. Chickens likewise are kept in small numbers by millions of rural families. The development of an organized poultry sector has been confined largely to the outskirts of larger cities, and the availability of commercial poultry feed is limited.

The modernization of Bangladesh agriculture has been chiefly in the area of seed improvement, fertilizer use, and irrigation. Production remains human labor-intensive, with animals the chief additional source of power on the farm. There are approximately 500 tractors in the country, mainly used by the tea and sugar industries. The vast majority of farm implements are designed for use with bullocks and are manufactured locally by blacksmiths and small foundries.

Agricultural Production

	1988/89	*1989/90*
	thous. metric tons	
Crop production		
Jute	805	840
Potatoes	1,089	1,100
Rapeseed	207	230
Rice	15,580	17,990
Sugarcane	6,707	7,000
Sweet potatoes	544	580
Tea	44	44
Tobacco	39	39
Wheat	1,022	890
Yellow peas	158	165

	1984[1]
	thous. head
Livestock numbers	
Buffalo	567
Cattle	21,495
Goats	13,558
Poultry	73,313
Sheep	667

	thous. metric tons
Animal product output[2]	
Milk	1,326
Meat	435
Eggs[3]	1,910

[1] *Latest available data. Since 1984, the cattle population has increased by about 0.5 percent per year, while goat, buffalo, and sheep populations have stagnated.*

[2] *Underlying growth rates in recent years for milk, meat, and eggs are estimated at 1.77 percent, 2.38 percent, and 6.34 percent, respectively.*

[3] *Million eggs.*

Bangladesh at a Glance

Population (1989/90): 111.6 million
Urban population: 15%
Population growth rate: 2.3%
Land area: 143,999 kilometers; 85% agricultural
Per capita gross domestic product: $202
Major crops: Rice, wheat, jute, tea, sugarcane, tobacco, lentils, rapeseed, potatoes
Livestock sector: Cattle, poultry, goats, buffalo, sheep, ducks
Leading agricultural exports: Leather, jute, frozen froglegs and shrimp, tea
Leading agricultural imports: Wheat, rice, edible oilseeds and oils, cotton, sugar
Agricultural imports as a share of total imports: 22%
U.S. share of total agricultural imports: 19%
Percent of labor force in agriculture: 61%
Membership in economic and trade organizations: ADB, GATT, SAARC

Production highlights

After several years of stagnation, in part because of a series of severe floods, agricultural output increased 5.6 percent in 1989/90. Crops were also excellent during the first half of 1990/91.

Rice output increased by 15.5 percent in 1989/90 and continued to

Value of Agricultural Imports, 1989/90

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cotton	87	45
Edible oil and oilseeds	161	3
Rice	102	10
Sugar	44	0
Wheat	241	42
Others[2]	180	1
All agricultural products	815	19

[1] *Values are shown in U.S. dollars at U.S.$1=32.9214 taka. Includes commercial and concessional imports.*
[2] *Estimated.*

rise in 1990/91. Jute, tea, sugarcane, pulse, rapeseed, and potato crops also increased as a result of good weather, greater involvement of private traders in input distribution, improved credit, and liberalized imports of pumps and tillers. Wheat was the only major crop that suffered a setback, with output falling 13 percent in 1989/90.

One of the worst cyclones in 20 years struck the southeastern coast of Bangladesh on April 30, 1991. It took many lives, and severe flooding caused large-scale damage to coastal areas and offshore islands.

Farm and food policy

Self-sufficiency in food grain production has been a goal of the Government of Bangladesh since independence in 1971. The Government seeks to expand small-scale irrigation; to increase cropped area by 3.5 percent per year; to persuade farmers to diversify crops, particularly on lands newly brought under cultivation; and to strengthen input and output markets.

The Government supplements food from foreign donors with purchases in price support/stabilization programs for wheat and rice to run a wide range of food-for-work and relief programs for the poor. Despite these interventions, most of the domestic food trade is in private hands.

International aid donors strongly support an increased role for the private sector in the country's agricultural development.

Imports and exports

Bangladesh is a net agricultural importer, with imports of $815 million in 1989/90 versus exports of $170 million.

Wheat imports declined to 1.2 million metric tons in 1989/90 but rose in 1990/91 to 1.8 million tons. Most of this wheat was obtained free or on highly concessional terms from foreign donors, both bilateral (the United States, Japan, and Canada) and multilateral (the World Food Program).

Edible oil imports have decreased from a peak of 452,000 metric tons in 1987/88. Imports in 1989/90 totaled 425,000 metric tons, including 275,000 metric tons of soybean oil and the balance composed of palm and rapeseed oils. Bangladesh imports soybean oil mainly from South America and Europe, with concessional purchases from the United States under the Food for Peace Program.

Palm oil's share of imports has been rising rapidly because it enjoys a substantial price and transportation advantage over competing oils.

Cotton imports reached a record 68,000 metric tons in 1989/90. The United States was the largest supplier, with 45 percent of the market, followed by Pakistan, the Sudan, the Soviet Union, India, and China. Bangladesh produces only about 15 percent of its cotton requirements.

Two excellent rice crops in succession prompted the Government to suspend rice imports in 1990/91. Rice imports in 1989/90 totaled 324,000 metric tons, of which 283,000 were purchased on commercial terms from Thailand, Pakistan, and Vietnam. The United States provided 29,000 metric tons under the Food for Peace Program.

The country suffers a chronic deficit in milk and milk products. Milk output is estimated at 1.3 million metric tons, far short of the estimated requirement of 5 million metric tons. The shortfall has been partially covered by imports of 60,000 to 70,000 metric tons of milk powder from New Zealand, Australia, and the Netherlands.

Trade policy and prospects

Current policy encourages imports only of raw materials for the industrial sector and such imports as are necessary to maintain supplies and to control prices of essential food commodities. Agricultural products—food grains, edible oils, cotton, and sugar—accounted for 22 percent of all imports in 1989/90.

Food grains, cotton, and soybean oil are the principal U.S. exports to Bangladesh. These totaled $155 million in 1989/90, about one-third of them under the Food for Peace Program.

Despite its success in increasing food output in the past 2 years, the country must struggle to keep agricultural growth ahead of its rapidly increasing population. Gains in food grain output have not been paralleled by increases in the production of other food products, such as oilseeds and pulses; thus, there has been little net gain in the overall nutritional status of the population.

Bangladesh will continue to need large volumes of imported foodstuffs, particularly when natural disasters occur. However, these imports will be constrained by the availability of foreign aid and the country's limited hard currency reserves. ■

Belgium-Luxembourg

B

Profile of agriculture

There is a long-term downtrend in the importance of agriculture in Belgium's economy. In 1989, the number of farms was down 2.6 percent to 89,445, and agriculture's contribution to the gross national product (GNP) dropped to under 2 percent.

This downtrend has been accompanied by a trend toward larger holdings and intensification. Within the European Community (EC), Belgium accounts for about 1 percent of total farms, area cultivated, and farmworkers, but it accounts for 3 percent of EC production in value terms. Average farm size is 15.2 hectares. Close to 70 percent of farms operate full time and account for all but a marginal portion of total production.

Important sectors are pork, beef and veal, dairy products, fresh vegetables, and sugar beets. Animal products account for two-thirds of the total value of Belgium's agricultural production, while field crops and horticulture account for 13 percent and 20 percent, respectively.

The agricultural situation in Luxembourg is similar to that in Belgium. Agriculture's contribution to GNP in 1989 also fell below 2 percent, while employment in agriculture, including forestry, declined to 3 percent. There were only 3,390 farms larger than 2 hectares, but among these the average size was 37.2 hectares.

Milk accounts for more than half of the gross value of Luxembourg's agricultural production. Other important commodities in terms of value are beef, wine, pork, and cereals. Luxembourg's largest field crop is corn for silage, but it is mostly used on farms.

Agricultural Production

	1989	*1990*[1]
	thous. metric tons	
Crop production		
Belgium		
Apples	315	254
Barley	650	560
Corn silage	6,196	6,200
Potatoes	1,453	1,500
Sugar beets	6,640	7,280
Wheat	1,450	1,300
Luxembourg		
Barley	59	59
Corn silage	386	385
Oats	20	16
Potatoes	23	25
Wheat	33	34
	thous. head	
Livestock numbers		
Belgium		
Cattle	3,124	3,277
Cows in milk	930	910
Hogs	6,345	6,857
Laying hens	7,150	7,150
Sheep	156	161
Turkeys	190	200
Luxembourg		
Cattle	215	218
Hogs	77	75
Poultry	65	69
Sheep	8	7

[1] *Preliminary.*

Luxembourg at a Glance

Population (1990): 378,000
Urban population: 44%
Population growth rate: 1.1%
Per capita income (1990): $24,953
Total land area: 2,586 square kilometers
Major crops: Wine grapes, grains, forages
Livestock sector: Dairy
Leading agricultural exports: Animals and animal products, wine
Leading agricultural imports: Animals and animal products, wine

Belgium at a Glance

Population (1990): 9.9 million
Urban population: 41%
Population growth rate: 0.0%
Per capita income (1990): $19,306
Total land area: 30,519 square kilometers; 4.5% agricultural, 2% crop, 2% meadows and pastures, 2% forest and woodland
Major crops: Cereals, sugar, fruits, vegetables
Livestock sector: Dairy and beef cattle, hogs, poultry
Leading agricultural exports: Animals and animal products, grains and preparations, oilseeds, seeds and feeds, fats and oils, fruits, vegetables, horticultural products, sugar
Leading agricultural imports: Animals and animal products, wheat, corn, grain sorghum, other grains and preparations, soybeans and meal, seeds, fats and oils, fruit and nuts, vegetables, cotton, tobacco
Agricultural imports as a share of total imports: 7%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 2%
Membership in economic or trade organizations: Benelux, BLEU, EC, GATT, IBRD, IMF, OECD

Production highlights

Production levels in the two countries were in the normal range for most commodities in 1990, despite problems with weather and disease. A late freeze reduced the apple and pear

Value of Agricultural Imports, Belgium-Luxembourg, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Animals and animal food products	2,598	3
Animal nonfood products	519	[2]
Canned fruit and vegetables	436	1
Corn	250	1
Cotton	68	15
Fats and oils	398	3
Fruits and nuts	675	2
Oilseeds	1,681	9
Soybeans	306	37
Rice	81	44
Tobacco	265	6
Vegetables	548	[2]
Wheat	240	3
All agricultural products[3]	9,917	4

[1] *Values are shown in U.S. dollars at U.S.$1=39.36 Belgian* francs.
[2] *Less than 0.5 percent.*
[3] *Includes products not listed. Excludes forest products.*

crops sharply. Summer drought affected all sectors, especially dairy production, where it reduced milk deliveries 3 percent. Drought and disease lowered cereal production about 9 percent, although the quality of about two-thirds of the crop was higher than normal. The vital hog sector was hurt by swine fever from late winter onward.

In addition, a general decline in prices—down 7 percent for cereals, 10 percent for pork, and 8 percent for beef—contributed to a sharp drop in farmers' incomes. In 1990, agricultural income is estimated to have dropped 15 percent in Belgium, which had the poorest performance in the EC. Internal estimates show a 27-percent drop in farmers' purchasing power.

In Luxembourg, agricultural income was down 7 percent in 1990, after a nearly 16-percent gain in 1989. Much of the decline was due to the fall-off in grape must and wine production. There were no appreciable changes in levels of production of other commodities, but EC-wide price declines were certainly a factor in reducing farm income.

Farm and food policy

Belgian agricultural policy is mainly determined by the EC's Common Agricultural Policy. Farmers get most of their financial support through the EC price support system for commodities. The Belgian Government spends relatively small amounts of its budget on agriculture.

At the national level, officials are constrained from taking initiatives because of the tension that exists between the Flemish-speaking region in the north and the French-speaking Walloons in the south.

In Luxembourg, the agricultural sector's political and social importance is greater than might be suggested by its contribution to the country's GNP, workforce statistics, and the number of farms. Consequently, Luxembourg provides additional national support to its farmers through grants for projects designed to cut production costs; payments to farmers abandoning milk production; partial rebate of excise taxes on tractor fuel; grants for farmers' health, accident, and pension funds; grants for export promotion and consumption programs; grants or subsidies for a wide range of agricultural organizations; and grants to individuals who attend agricultural schools.

Imports and exports

Belgium and Luxembourg run an agricultural trade deficit with the world and with the United States. From 1988 to 1989, Belgium and Luxembourg managed to cut their overall agricultural trade deficit by half, from about $1.5 billion to $750 million.

As members of the EC, the greater part of Belgium and Luxembourg's trade is with other EC members, principally with France, the Netherlands, and Germany, which together account for two-thirds of total Belgium-Luxembourg agricultural trade.

Agricultural imports from non-EC countries make up 30 percent of total imports, while exports to non-EC countries account for 20 percent of total exports.

The Belgium-Luxembourg market, although small, is important for U.S. farm products. The United States normally accounts for 4 to 5 percent of Belgian agricultural imports, and the types and quantities of commodities have been fairly stable over the past several years.

In 1989, imports from the United States did drop substantially to only $346 million, but most of the difference was caused by displacement of U.S. soybeans by beans from Brazil and Paraguay. U.S. soybean sales in 1990 were at more normal levels because of poor crops in Brazil and Paraguay.

Belgian exports to the United States totaled $99 million in 1988 and rose to $114 million in 1989.

Trade policy and prospects

The trade policy of Belgium and Luxembourg is inextricably part of the EC's Common Agricultural Policy. Tariffs, levies, special trade concessions, export subsidies, and trade barriers all follow EC rules. ■

Bolivia

B

Bolivia at a Glance

Population (1990): 7.3 million
Urban population: 47%
Population growth rate: 2.6%
Per capita income (1990): $750
Land area: 1,084,390 square kilometers; 25-30% in various agricultural uses
Major crops: Potatoes, corn, rice, sugarcane, yucca, bananas, coffee, soybeans, cotton
Livestock sectors: Beef cattle, poultry meat, sheep, llamas, alpacas
Leading agricultural exports: Coffee, sugar, soybeans, leather, cattle
Leading agricultural imports: Wheat, wheat flour
Percent of population in agriculture: 50%

Profile of agriculture

Landlocked Bolivia suffers from the serious disadvantage of high transportation costs for marketing products both domestically and to foreign buyers. Bolivia is the second poorest country in the Western Hemisphere (after Haiti) and often experiences food shortages, particularly in highland "altiplano" regions.

Bolivia's principal traditional crops are potatoes and corn, grown in the western highlands, and sugarcane and cotton, which are grown in the warmer eastern lowlands. In recent years, soybean production has increased rapidly, and sunflowers also are being promoted and financed by the Santa Cruz-based oilseed processing industry. Cattle raising continues to be the leading livestock enterprise, generating larger amounts of slaughter cattle and meat exports to Brazil, Peru, and Chile.

Agriculture provides about 20 percent of the gross domestic product; however, Bolivia's agricultural production has been able to meet only about 80 percent of the nutritional needs of the population. Bolivia depends heavily on wheat imports to partially fill the food gap.

Bolivia has two basic agricultural climates. The Andean "altiplano" or high plane, at an elevation of 10,000-14,000 feet, has the cooler climate and favors the production of potatoes, soft "choclo" corn for human consumption, and various cool weather fresh vegetables (broccoli, cauliflower, carrots, lettuce, cabbage, and so forth).

The subtropical climate in the eastern half of the country favors production of sugarcane, soybeans, cotton, rice, and hard-dent corn used for animal feed.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Barley	58	46
Coffee	27	25
Corn (for feed)	417	373
Cotton	1	2
Potatoes	638	521
Rice	226	206
Soybeans	294	230
Sugarcane	2,053	2,350
Sunflowers	5	10
Wheat	64	52
	mil. head	
Livestock numbers		
Cattle	5.58	5.95
Hogs	2.13	2.22
Sheep	7.70	8.10
	thous. metric tons	
Animal product output		
Beef	135	144
Eggs[1]	93.6	101.5
Lamb and mutton	15.8	16.6
Pork	43.0	44.8
Poultry meat	11.2	11.5

[1] *Million eggs.*

Production highlights

Agricultural production declined in 1990 because of a serious drought affecting the entire Andean region from Ecuador to Chile. However, in 1991, production prospects have improved, with good gains expected for the soybean and cotton crops. Overall, agricultural production is expected to grow by about 5 to 10 percent during 1991.

Responding to international market prices, Bolivia's oilseed output has been expanding dramatically. Over the long term, soybean plantings have risen 10 to 15 percent annually. This growth has been encouraged by favorable prices and production.incentives from the local industry, which provides seed, fertilizer, and pesticides up front and later discounts these items against the grower's price paid at the plant.

Cotton plantings, following an extraordinarily profitable year for the industry in 1990, have swelled from 3,000 hectares in 1990 to about 16,000 hectares in 1991. Cotton increasingly is competing with soybeans for crop area. Planted area may soon reach the levels of 50,000 hectares typical of the mid-1970's. (The only bottleneck to recovering to former production levels is for the industry to buy back some of the cotton gins that it sold to Paraguay in the past decade.)

Sunflower acreage has jumped from 0 to 15,000 hectares in 3 years as an oilseed processing plant is financing the crop in order to enlarge supplies. The plant is producing a soya-sun-

flower oil product for the domestic and export market in Chile and Peru.

Bolivia's wheat production also has expanded significantly. There does not appear to be sufficient land with a suitable climate for Bolivia to ever be totally self-sufficient in wheat production. Nevertheless, the wheat harvest has almost doubled in 2 years as expanded acreage in the Santa Cruz area, coupled with the use of new wheat varieties, has boosted output.

In the last 2 years, the livestock sector has grown rapidly as poultry meat and egg output have risen at an unprecedented pace. The swine, beef, and dairy cattle industries also have expanded, but at a slower rate. These industries are crucial outlets for soybean meal, cottonseed meal, corn, sorghum, sugarcane byproducts, and other feedstuffs.

Beef and dairy cattle herds were hard hit by 1990's drought, with herd losses of 5 to 10 percent in many areas. Beef and dairy operations in the Santa Cruz area continue to modernize, particularly with the arrival of new refrigeration equipment for the dairy industry and better meat processing and marketing operations for beef cattle.

Farm and food policy

After continual bouts of hyperinflation in the early 1980's, Bolivia has kept inflation under control for the last 6 years by maintaining tight credit conditions. As a result, the inflation rate is under 10 percent and is among the lowest in Latin America.

Agricultural credit continues to be a major problem in Bolivia, but more international loans are being made available. Some sources of private credit and local funding are improving.

The Government has continued with its free-market approach, exercising little, if any, control over marketing and prices. Virtually all commodities except sugar are traded without price controls. As a result, Bolivia has one of the most open markets in South America.

The Government of Bolivia continues to promote coffee as a substitute for coca production. Since 1980, the Government has encouraged the use of new coffee varieties and other cultural practices to boost yields and the quality of the beans.

Imports and exports

Bolivia is a net agricultural exporter, with purchases of $35 million in 1989, versus sales of $235 million.

The largest food imports are wheat and wheat flour, much of which is provided by the United States. Bolivia imports about 250,000 tons of wheat and wheat flour, with about 180,000 tons coming from the United States under the Food for Peace Program. The balance of the wheat comes from neighboring Argentina.

Bolivia's exports have risen rapidly in the last several years as sales of soybeans and soybean products, sugar, and cattle and hides have taken off. However, in 1990, Bolivian exports of soybeans and products were down moderately because of the drought. Most of the soybeans went to Brazil for processing and export, while the meal and oil went to Peru and Chile.

Coffee exports have fallen in value with the loss of the International Coffee Organization's pricing and quota agreement. In 1990, producers tried to boost export volume sharply to compensate for falling prices, but exports still amounted to only about 10,000 tons valued at $14 million.

Trade policy and prospects

Bolivia's foreign trade has boomed in recent years, with the dramatic growth in soybean exports and strong growth in imports prompted by an across-the-board 10-percent tariff for all imports. Capital goods are an exception, receiving an even more favorable 5-percent import duty. Bolivia's tax rebate export certificates were eliminated on January 1, 1991.

Bolivia's low tariff rates partially compensate for the high transport costs paid when importing goods. Bolivia's tariff duties are the lowest of any Andean Pact country and may have to rise to reach a common external tariff currently planned for the Andean Trade Pact of January 1992.

Most Bolivian importers feel they will lose out and have to accept higher import duties if the Andean Pact establishes a free-trade zone as agreed upon in a November 1990 meeting. Since Bolivia trades more with Chile, Argentina, Paraguay, and Brazil than with other Andean Pact countries, trade with these countries will suffer if the common external tariff rises to the 20- to 50-percent levels being discussed.

Bolivia stands to benefit from the U.S. Enterprise for the Americas Initiative, which would give the country some debt relief and eventually establish a duty-free trade zone with North America. Under the Andean Trade Initiative, Bolivia may receive duty-free access for most of its products exported to the United States.

In October 1990, the European Community (EC) gave the four Andean countries duty-free access for most of their exports. The EC measure continues for 4 years and is intended to help create a viable economic alternative to the drug trade. Exporters in Bolivia are already taking advantage of their special status in shipping products to the EC, and are actively pursuing similar treatment in the U.S. market. ■

Brazil

B

Profile of agriculture

Agriculture accounts for about 10 percent of Brazil's gross domestic product and employs 11 percent of the nation's labor force. Brazil ranks as one of the world's leading exporters of agricultural products, which account for 40 percent of export revenues.

The largest country in South America, Brazil is slightly smaller than the United States in total land area. It is the world's largest producer of sugarcane and coffee and has one of the world's largest cattle herds. Other important products are oranges and frozen concentrated orange juice (FCOJ), rice, corn, cocoa, soybeans, cotton, and tobacco.

Brazil is almost self-sufficient in food production except for wheat, which it must import to augment national production.

Brazil has two distinct, contrasting agricultures: One, located in the central-south region, is modern, has temperate rainfall, the best soils, good infrastructure, and produces most of Brazil's food and export crops.

The other, located in the northeast and frontier areas, is traditional. The northeast lacks well-distributed rainfall and good soils. Frontier or backland areas, such as the Cerrados (savannah brushlands), offer the greatest potential for expanding food production but lack infrastructure and development capital.

Agricultural Production

	1989	*1990*
	mil. metric tons	
Crop production		
Cocoa	0.3	0.3
Coffee	1.6	1.9
Corn	26.1	21.8
Cotton	0.7	0.7
Dry beans	2.3	2.6
Oranges	14.2	12.1
Rice	11.0	7.4
Soybeans	23.2	19.3
Sugarcane	200.0	220.0
Tobacco	0.5	0.4
Wheat	5.5	3.2
	mil. head	
Livestock numbers		
Cattle	134	136
Beef	120	121
Dairy	14	15
Hogs	31	33
Poultry	87	90
Broilers	13	14
Layers	65	67
Turkeys	9	9
	mil. metric tons	
Animal product output		
Beef and veal	3.5	3.3
Eggs[1]	13.4	13.4
Milk	13.4	14.2
Pork	0.9	1.1
Poultry meat	2.1	2.4

[1]*Million dozen.*

Production highlights

Brazil's agricultural production in 1990 is estimated to have declined by 4 percent, the second consecutive annual decrease. Production of major grains and oilseeds dropped because of bad weather and reduced availability of low-cost rural credit to finance production inputs. Untimely frost devastated the 1990 wheat crop, which fell to its lowest level in more than 5 years.

Beef production declined slightly in 1990 to 3.3 million tons, but producer prices remained firm. Poultry production continued to increase in response to strong domestic and export demand and reached a record-high 2.4 million tons in 1990.

The world's largest sugarcane producer, Brazil allocates about 55 percent of its annual crop for ethyl alcohol to power the nation's 4 million automobiles.

Brazil at a Glance

Population (1990): 150 million
Urban population: 74%
Population growth rate: 1.9%
Per capita income (1990): $2,489
Total land area: 8,511,996 square kilometers; 8% crop use, 17% animal production, 65% forests, 10% other agricultural uses
Major crops: Sugarcane, coffee, corn, soybeans, manioc, rice, wheat, oranges, cocoa, dry beans, cotton, tobacco
Livestock sector: Beef and dairy cattle, poultry, pork
Leading agricultural exports: Coffee, soybeans, frozen concentrated orange juice, meats, sugar, forest products, tobacco, cocoa, hides and skins
Leading agricultural imports: Wheat, corn, rice, dairy products, malt, breeding stock, seeds
U.S. share of total agricultural imports: 9%
Percentage of labor force in agriculture: 11%
Membership in economic or trade organizations: ALADI, Cairns, GATT, ICAC, ICCO, ICO, IDB, IFAD, IRC, IWC, OAS

After Côte d'Ivoire, Brazil ranks as the world's second largest cocoa producer. The 1990 crop was up from the previous year.

Brazil remains the world's largest coffee-producing country. Its 4.3 billion coffee trees have a maximum annual production potential of over 40 million bags (60 kilograms each).

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Apples and pears	50	2
Corn	83	30
Dairy products	123	0
Dried fruits and vegetables	40	10
Hides and skins	65	5
Livestock, poultry, and semen	40	57
Meat	192	7
Rice	139	14
Tallow	15	60
Wheat	178	0
Wood products	25	8
All agricultural products[2]	1,200	9

[1] *Values are in U.S. dollars at U.S.$1=55.52 new Brazilian* cruzados.
[2] *Includes products not listed.*

However, production is irregular because of alternating production cycles and weather. The 1990 coffee crop was up nearly a fifth from the year before to 31 million bags.

Farm and food policy

Brazilian agricultural policy is based on the notion of complete self-sufficiency and has two key components: minimum guaranteed prices and provision of credit. In 1990, budget constraints, coupled with tight monetary policy, caused reductions and delays in the provision of official subsidized rural credit.

Agricultural prices fell to historic lows in 1990, mainly because of a sweeping new economic package that radically reformed the monetary system. Many farmers, who normally obtain credit from a number of financial sources, were unable to borrow at high commercial interest rates and were forced to forward sell a portion of their crop to cooperatives and private concerns to finance production inputs.

Producers also were hit hard by an overvalued currency, and exports—particularly of soybeans and soybean products—plunged in international markets.

As part of its goal to move the country to a market-oriented economy and because of budgetary constraints, the Brazilian Government privatized the wheat industry in 1990. The 30-year-old Government monopoly is slowly being dismantled, and farmers can now sell directly to wheat millers. The quota system for supplying wheat to mills has been terminated, and private-sector imports will be allowed.

However, the Government is expected to continue as the guarantor of the national wheat supply.

In addition to passing Brazil's first farm bill into law, the Government is currently carrying out a program of agrarian reform.

Further, the Brazilian Government is working with the United States to monitor the burning of the Amazon Forest and the gases that have been emitted. The rate of destruction has apparently slowed. Although soybean acreage has increased in past years at the expense of forest lands, a change in Government farm policy is expected to discourage further losses.

Imports and exports

Brazil is one of the world's largest agricultural exporters, with exports in 1990 valued at $8.7 billion versus imports of $1.2 billion. Agricultural exports were down from the year before as a result of an overvalued currency, lack of export financing, increased export taxes, and higher port costs.

Foreign exchange earnings from the all-important coffee crop were down substantially, from $1.8 billion in 1989 to $1.4 billion in 1990. The decline was mostly due to the suspension of the International Coffee Agreement, which caused world prices to drop considerably. Soybean exports were also down in value, while sugar exports declined in volume.

FCOJ exports are estimated to have increased over 20 percent in value in 1990, as both volume and prices benefited from the 1989 Florida freezes.

High domestic beef prices and an overvalued currency are mainly responsible for a drop in beef exports to 200,000 tons in 1990. Brazilian chicken exports were estimated at 280,000 tons in 1990, a 14-percent increase over 1989.

Brazil's agricultural imports are estimated to have risen in 1990 mainly because of production shortfalls of rice, corn, and wheat.

Trade policy and prospects

In 1990, the Brazilian Government introduced bold trade policy changes designed to open the economy to foreign competition and to move toward a market-guided system. Most nontariff barriers to trade are expected to be removed and replaced with a new tariff schedule.

Although these measures have facilitated imports of food products (largely high-value products), tariffs and other high domestic costs make imports expensive for Brazilian consumers. Brazil continues to import bulk agricultural products only when shortages of domestic supplies are perceived. ■

Bulgaria

B

Profile of agriculture

Agriculture is one of the major economic activities in Bulgaria, contributing significantly to the gross domestic product. In its effort to move away from centrally planned to market economics, Bulgaria views agriculture as a priority area for restructuring and development.

About 90 percent of Bulgaria's agricultural area has been organized into socialist agricultural units, but this structure will change drastically in the coming years as private property is reintroduced. Only small household plots fall under the category of "personal" or "private" agriculture. Private plot areas were increased slightly in 1990, but these resemble gardens more than commercial agricultural fields.

Aging farm labor and urban migration are problems in Bulgaria, leaving the countryside void of experienced, enterprising young agriculturalists. The exodus of more than 300,000 ethnic Turks in 1989 also disrupted production of a number of labor-intensive crops, especially tobacco.

Agricultural production regions in Bulgaria vary greatly, with spacious, rolling grain fields in the northeast, mixed farming in the north-central section, vegetable and specialty crops in the Plovdiv Valley, and oriental tobacco in the southern hills and mountains.

Agricultural Production

	1989/90	*1990/91*[1]
	thous. metric tons	
Crop production		
Barley	1,572	1,344
Corn	2,265	1,241
Potatoes	5,534	4,268
Sunflower	458	365
Tobacco	75,553	66,968
Vegetables	1,662	1,672
Wheat	5,425	5,095
Wine grapes	586	543
	1989	*1990*
	mil. head	
Livestock numbers[2]		
Cattle	1.6	1.6
Poultry	36.3	28.0
Sheep	8.6	7.9
Swine	4.1	4.0
	thous. metric tons	
Animal product output		
Butter	21.9	21.9
Cheese, white	113.7	110.9
Cheese, yellow	34.8	34.4
Eggs[3]	2,731	2,471
Meat	590.7	538.0
Milk[4]	2,427	2,387

[1] *Preliminary.*
[2] *As of January 1.*
[3] *Million eggs.*
[4] *Million liters.*

Production highlights

Bulgaria's agricultural production in 1990 was down by 5 percent or more. A sustained dry period reduced summer crop output, especially of corn. Secondary causes for the decline were severe import limitations (curtailing feed and other industrial inputs for agriculture) and poor labor efficiency as uncertainty about general economic and political conditions distracted workers.

Winter grain crops were the one bright spot in 1990 agricultural production. Wheat output in 1990 totaled 5.1 million metric tons, down slightly from 5.4 million tons in 1989. Barley production also dropped marginally in 1990 and totaled 1.3 million tons, compared with 1.5 million a year earlier.

Production of field vegetables and other specialty crops suffered less from the drought conditions but faced greater labor difficulties during harvesting, storage, and marketing. Labor brigades were not employed as in past years to bring in the harvest.

Bulgaria at a Glance

Population (1990): 8.9 million
Urban population: 69%
Population growth rate: -0.35%
Per capita income (1989): $1,886
Total land area: 110,993 square kilometers; 68% agricultural, 35% cropped
Major crops: Wheat, corn, barley, tobacco, sunflowerseeds, fruits, vegetables
Livestock sector: Hogs, poultry, sheep, cattle
Leading agricultural exports: Tobacco, sheep and lamb, poultry meat, eggs, fruits and juices, wine
Leading agricultural imports: Corn, soybeans, cotton, sugar, butter
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: Less than 2%
Percent of labor force in agriculture: 20-25%

A major concern in the last half of 1990 was the supply of petroleum products for agricultural production. Supplies of chemical fertilizers, high-quality seeds, and plant protection chemicals were also inadequate in 1990.

Farm and food policy

Although the political setting in Bulgaria changed dramatically in the last 2 months of 1989 and major changes were introduced throughout 1990, the basic tenets of agricultural

policy remained in place. The system is still founded on centrally planned production, marketing, and retailing. However, it is likely that new laws, regulations, and structures will be introduced in 1991.

State subsidies remain a strong pillar for controlled basic food products. Major policy discussions in 1990 focused on appropriate price levels. In spite of the liberalization of fruit and vegetable prices and increases for other controlled prices, producers were hesitant to supply the market.

Producers were unwilling to sell goods earlier than necessary, fearing inflation would reduce purchasing power and, because of the lack of available goods in the market, they could not convert products into other hard items.

The major policy debate in agriculture centers on legislating a land law that will provide a legal basis for the return of land and property taken from peasants and collectivized after World War II.

There is also a need to specify under what conditions land can be sold and to whom. The establishment of new legal and regulatory authority will require time, but a general and significant trend toward private ownership and market economy is expected, although some restrictive stipulations will be placed on landowners.

Bulgaria's new leadership has given that country's consumers the green light to press for the kinds and quality of food that they want. Indications are that, after decades of resignation, Bulgarian consumers are voicing their desires loudly and clearly, with the possible result that domestic demand will become a formidable force for greater farm and food imports.

Political commitment to the improvement of food supplies became evident in May 1990 when the Government banned exports from 16 categories of foodstuffs, including meat and meat products, vegetable oil and margarine, and grain products. The export ban was made possible by the Soviet Union's willingness to take fewer farm goods in its trade with Bulgaria.

Imports and exports

Bulgarian trade in 1990 was plagued by nonserviceable foreign debt totaling nearly $11 billion. In March 1990 a unilateral moratorium on all debt repayment was declared, forcing a near halt to trade. U.S. agricultural exports to Bulgaria dropped precipitously, although the country's need for many feed grains, proteins, and other commodities persisted.

Through August 1990, U.S agricultural exports to Bulgaria totaled only $8 million, compared to nearly $130 million in 1989. Total trade in 1990 will likely not top $10 million. Bulgarian agricultural exports to the United States, however, did increase slightly in 1990, totaling $16 million from January through August, up from $14 million during the same period in 1989.

In the absence of credit, barter trade failed to adequately supplant direct trade, although some agricultural commodities were traded via barter in 1990. Such arrangements will probably continue in the near future; however, increasing attention will be paid to cash and credit purchases.

Trade policy and prospects

Currency inconvertibility, hard currency shortages, and Government dominance over trade remain formidable barriers to imports from the West. Mandatory licensing is required for most import and export transactions. However, the state monopoly over foreign trade and investment was liberalized in early 1989, so that firms may now engage in foreign trade without prior approval from the central Government. In early 1990, a decree promoting private-sector involvement in distribution and the retail trade was adopted.

Bulgaria has already taken steps to demonopolize the large commodity-specialized economic units that dominate domestic and foreign trade. However, the transition to new organizations will be difficult and will require time.

With the conclusion of the former socialist block trading unit (CEMA), Bulgaria is looking increasingly to the West and the United States for agricultural trade opportunities.

In the past, four-fifths of Bulgaria's trade was with the Soviet Union and other East European countries, mostly in the framework of formalized annual barter arrangements. The disintegration of this trading system is pushing Bulgaria farther and faster into the wider world of trade.

Bulgaria has been a substantial net exporter of farm goods under conditions of state-directed trade and could continue as one even under a free-trade regime. But under its new trading arrangement, Bulgaria will not have to commit itself to future food exports to the Soviet Union.

Import liberalization is likely to be among the most significant changes in Bulgarian trade policy during the next several years as the country seeks to expand markets for its own goods. For example, greater access to the EC market, not least of all for agricultural products, will require an opening of the Bulgarian market in return. Also, Bulgaria has applied for membership in the General Agreement on Tariffs and Trade (GATT), which will entail reciprocal concessions on imports.

U.S. trade prospects with Bulgaria will increase if the process of granting most-favored-nation status proceeds. ■

Canada

C

Canada at a Glance

Population (1990): 26.5 million
Urban population (1990): 73%
Population growth rate: 0.85%
Per capita gross domestic product (1989): $20,984
Total land area: 9,976,185 square kilometers; 5% arable
Major crops: Wheat, barley, canola, corn, soybeans, vegetables
Livestock sector: Cattle, hogs, poultry, sheep, dairy products
Leading agricultural exports: Wheat, barley, slaughter cattle, pork, canola, wood products
Leading agricultural imports: Vegetables, fruits, nuts, beef, soybeans and soybean meal, processed food products
Agricultural imports as a share of total imports: 6%
U.S. share of total agricultural imports: 57%
Percent of labor force in agriculture: 3.5%
Membership in economic or trade organizations: Cairns, GATT, OECD

Profile of agriculture

Canada is one of the world's largest countries, with a climate that varies from temperate to arctic. Although Canada is a small agricultural producer relative to total world output, it is a major agricultural exporter and an importer of many agricultural products.

Agriculture is a relatively small part of the total economy, but it is important in western Canada, where most of the crop production and much of the livestock production occur in the prairie provinces of Alberta, Saskatchewan, and Manitoba. The dominant crop is wheat, followed by barley and canola (rapeseed). Cattle production is also significant.

Agriculture is less important in the more heavily populated and industrialized central provinces of Ontario and Quebec; however, significant dairy, poultry, and crop production in Ontario makes that province the largest generator of farm cash receipts.

Quebec is the largest dairy-producing province, the second largest chicken producer, and a major production center for pork, of which a substantial proportion is exported to the United States.

Forestry is a significant agricultural industry. One in 10 Canadians owes employment directly or indirectly to Canada's forest industries.

Commercial fisheries provide an annual catch of over 1 million tons, approximately 75 percent of which is exported.

Agricultural Production

	1988/89	*1989/90*[1]
	mil. metric tons	
Crop production[2]		
Canola	3.1	3.3
Corn	6.4	7.0
Barley	11.7	13.5
Soybeans	1.2	1.3
Wheat	24.6	31.8
	1989	*1990*[1]
	thous. head	
Livestock numbers		
Cattle		
Beef	11,016	11,201
Dairy	1,449	1,429
Hogs	11,018	10,861
Poultry		
Layers	23,000	23,000
Turkeys	19,417	[3]
Sheep	481	513
	thous. metric tons	
Animal product output		
Beef and veal	980	922
Butter	99	97
Cheese	247	242
Eggs[4]	477	471
Milk	7,980	7,900
Pork	1,184	1,140
Poultry meat	659	694

[1] *Preliminary.*
[2] *Aug.-July crop years.*
[3] *Not available.*
[4] *Million dozen.*

Production highlights

Timely rains and excellent growing and harvesting conditions on the Canadian prairies in the spring and summer were responsible for record wheat production in 1990. Oilseed and coarse grain production also benefited from the good weather, increasing 16 and 11 percent, respectively, from 1989 levels.

Canola crush declined in 1990 because of low margins for canola oil, while soybean crush expanded to record levels to meet the domestic demand for edible oil.

Dairy production declined slightly in 1990, largely because of declining consumption of butterfat, which necessitated a reduction in the national industrial milk production quota of 3 percent in August. Given changing consumer preferences in favor of low-fat dairy products, the quota may be reduced again in August 1991.

According to preliminary figures, pork production in 1990 declined slightly from 1989 levels; however, improved price prospects are expected to contribute to a modest increase in 1991.

Beef production in 1990 declined, primarily as a result of a continued

Value of Agricultural Imports, 1990[1]

	Total imports	*U.S. share*
	$ mil.[2]	*%*
Selected products		
Beef and beef products	476.6	60
Corn	78.4	100
Fruits and nuts, fresh	1,090.5	59
Poultry meat	56.4	100
Soybeans and soybean meal	190.2	93
Vegetables, fresh	608.3	86
Vegetables and fruit, frozen	280.6	67
All agricultural products[3]	6,956.2	57

[1] *Based on Jan.-Nov. data, annualized.*
[2] *Values are shown in U.S. dollars at U.S.$1=$1.1659 Canadian dollars.*
[3] *Excludes forest products.*

shift toward cattle production in Alberta rather than in Ontario. As a part of this shift, increasing numbers of slaughter cattle from the prairie provinces are being marketed in the United States, causing the decline in Canadian beef output. This trend is expected to continue in 1991.

Farm and food policy

Canadian agricultural policy goals include maintaining adequate food supplies for domestic needs and exports, supporting farm income, and preserving the family farm.

Policy measures in the 1980's aimed at addressing such problems as the declining financial condition of some farmers and increased export competition, especially for grain and oilseed producers. Policies for sectors that serve mostly the domestic market, notably dairy and poultry, are specifically designed to limit foreign competition through the use of import quotas.

In addition to these Federal programs, Canadian Provincial Governments also have considerable power to formulate agricultural policy. Under the Canadian Constitution, agriculture is a shared jurisdiction (Federal and Provincial), and most provinces take an active part in planning and implementing programs for their own agricultural sectors.

Both levels of government in Canada have established agricultural marketing agencies, with varying amounts of power. The Canadian Wheat Board, perhaps the best known of these organizations, has the sole authority to export western Canadian wheat and barley and is the sole marketer of these grains for domestic human consumption.

Other national marketing agencies control the production and marketing of milk, shell eggs, chicken, and turkey and broiler hatching eggs, in cooperation with Provincial marketing boards.

Imports and exports

Canada is a major agricultural exporter and importer, exporting temperate-zone products and importing horticultural and tropical products for which the production potential in Canada is limited by the relatively harsh climate. Major exports include wheat, barley, canola, cattle, pork, and forest products.

Fruits and vegetables, nuts, beef, soybeans and soybean meal, corn, processed food products, sugar, and other tropical products are major agricultural imports.

Although Canada typically runs a surplus in total agricultural trade, the large volume of relatively high-value U.S. imports usually means that the balance of agricultural trade with the United States is negative.

For 1990, preliminary data showed Canada with an overall surplus of about $1.6 billion in agricultural trade with all other countries. However, these data showed that in 1990 the United States enjoyed a surplus of approximately $700 million with Canada. The chief contributors to the U.S. surplus were horticultural and tropical products, livestock and red meats, and processed foods.

In 1990, the United States provided over 57 percent of Canada's agricultural imports and received almost 40 percent of its agricultural exports.

Trade policy and prospects

Canada is highly dependent on trade for agricultural products as well as general merchandise items. The country strongly supports the negotiating positions of the Cairns Group and the United States with respect to elimination of export subsidies, but it has adopted a position in the Uruguay Round of the GATT Multilateral Trade Negotiations that calls for explicit powers to limit imports of agricultural commodities under supply management, specifically, dairy and poultry items.

The U.S.-Canada Free Trade Agreement, implemented in January 1989, has lowered tariffs on agricultural products by 30 percent from the most-favored-nation status existing before the agreement. Agricultural tariffs will be reduced to zero by 1998. The free trade agreement also provides for a bilateral settlement mechanism for trade disputes.

In February 1991, Canada, the United States, and Mexico announced their intention of seeking a North American Free Trade Agreement. Such an agreement may increase Canadian-Mexican trade in agricultural products in the future. ■

Chile

C

Profile of agriculture

Chile has a market-oriented, export-led economy—and its agriculture follows this pattern as well. The population of 13 million is not large enough to reward farmers consistently for selling commodities on the domestic market.

Consequently, for most commodities, supplying the domestic economy takes a back seat to the higher returns received for producing top-quality products for foreign markets.

The main Chilean crops are sugar beets, wheat, potatoes, corn, apples, and table grapes. Forestry production is one of the fastest growing sectors of the agricultural economy—and the emerging giant of the country's export sector.

Livestock production is dominated by beef. Beef production nearly matches the combined production of chicken and pork. Sheep are raised for wool rather than meat—and when animals are slaughtered, they are generally consumed by people in the countryside.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Beans	73	87
Fruit, total	1,890	2,070
Apples	660	690
Table grapes	540	630
Other fruit	690	750
Grains, total	3,137	2,974
Corn	938	823
Rice	185	136
Wheat	1,765	1,718
Other	249	297
Oils, total	145	80
Rapeseed	113	53
Sunflower	32	27
Potatoes	881	829
Sugar beets	2,810	2,594
Tobacco	10	14
	thous. metric tons	
Livestock production		
Beef	221	240
Butter	5	6
Cheese	22	24
Chicken	111	121
Eggs[1]	1,427	1,484
Milk, cow	1,270	1,420
Pork	113	120

[1] *Million eggs.*

Production highlights

The outlook for Chile's agricultural sector (including forestry) is generally positive. Crop production has nearly doubled since 1980, even as planted area has declined.

Farmers have learned to produce products to meet the demands of foreign markets. The fresh fruit sector has led the way in demonstrating how farmers and investors can reap large returns rapidly from a free-market economy. Now other agricultural sectors are attempting to follow the example of the fruit sector—and some sectors are expected to surpass it. The freshwater fish (salmon and trout), forestry, and fresh vegetable sectors all are expected to grow at a rapid rate over the short term.

The country is approaching self-sufficiency in wheat and rice production, although shortfalls still exist for durum wheat. Also, Chilean rice producers continue to produce short-grain rice, despite the fact that demand for imported long-grain rice has risen dramatically. The reluctance to shift apparently stems from the fact that growing short-grain rice requires less technical expertise and investment than long-grain production.

The forestry sector is one of the most rapidly growing segments of Chilean agriculture. In the past 20 years, actual forest plantings have

Chile at a Glance

Population (1990): 13.1 million
Urban population: 75-80%
Population growth rate: 1.6%
Per capita gross domestic product (1990 est.): $1,992
Total land area: 748,800 square kilometers; roughly 7% arable, 16% meadows and pasture, 21% forest and woodland
Major crops: Sugar beets, wheat, potatoes, corn, apples, table grapes, forest products
Livestock sector: Beef production dominates
Leading agricultural exports: Table grapes, apples, peaches, nectarines, pears, dry beans, plums, apple juice, canned peaches, raisins, rosehips
Leading agricultural imports: Cotton, corn, dry milk, soybean meal, coffee, bananas, wheat, rice
Agricultural imports as a share of total imports: 4%
U.S. share of total agricultural imports: 15%
Percentage of population in agriculture: 19%
Membership in economic or trade organizations: ALADI, Cairns, GATT, IDA, IDB, IFAD, IFC, IMF, OAS, SELA, WSG

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cotton	35.3	1
Fruits and vegetables	17.6	4
Grains and products		
Corn	12.5	89
Rice	7.1	2
Wheat	7.6	37
Other grains	.2	0
Livestock and products	23.6	14
Oilseeds and products	47.0	1
Seeds	3.9	63
Sugar and tropical products	47.3	14
Tobacco and products	5.0	9
All agricultural products[2]	333.1	15

[1] *Values are shown in U.S. dollars at U.S.$1=305 pesos.*
[2] *Includes products not listed.*

increased nearly tenfold. Over this same period, exports climbed nearly 20 times both in value and volume.

Chile has a climatic advantage in tree production. Depending on the tree variety, the rate of growth is three to four times more rapid in Chile than in the United States or Europe. Export success in New Zealand, Asia, Europe, and the United States continues to encourage further development in this sector.

Farm and food policy

Chile's agricultural policy is built around the principle, "let the market function." Key components of agricultural policy include: price bands for wheat, sugar, and vegetable oils which encourage production and discourage imports; a value-added tax of 16 percent for all commodities, both imported and domestically produced; floor prices for dairy products, cotton, and beef; and a direct subsidy to the forestry sector to stimulate production and exports.

The level of food consumption in Chile is heavily dependent on domestic production and exports. When domestic production is large, per capita consumption is large. When production shrinks, food consumption shrinks.

Likewise, the growth in exports has spurred a growth in domestic consumption of certain foods. A case in point is fruit consumption, which is nearly twice the 1970 level. All the fruit that does not meet the quality levels of foreign markets is sold in the Chilean market. However, while foreign markets are enjoying large silver dollar-sized grapes, Chilean consumers are left with small, discolored fruit.

Chile has the largest per capita consumption of wheat of any country in Latin America. Bread and pasta make up the single largest item in the Chilean diet. Wheat consumption is over four times larger than consumption of beef, pork, and poultry meat combined.

Per capita consumption of pork and poultry has been increasing over the past several years as consumers look for substitutes for their major sources of animal protein—beef and eggs. However, beef consumption is also on the rise—a sign that the economy is in relatively good condition. One of the first food items cut back in a time of pocketbook stress in Chile is beef.

Imports and exports

The agricultural trade balance is heavily in favor of Chilean exports. Exports are over three times larger than imports—nearly $1.1 billion sold in 1990, versus $333 million bought. The agricultural trade surplus with the United States is even more pronounced—exports are over eight times larger than imports.

Bulk commodities and farm inputs comprise most of Chile's agricultural imports. The country's biggest import items in 1990 were tropical products (such as coffee and tea), oilseeds and products, cotton, fruits and vegetables, corn, wheat, rice, and hides and skins.

Wheat has traditionally been the most important U.S. farm export to Chile, but corn is becoming more significant. In addition to bulk commodities, other major imports include inedible tallow, dairy and beef semen, and soybean isolates. Other needs that are not readily met by domestic production include cotton, seeds, nursery plants, packaged foods, spices, and vegetable oils.

On the export side, fruits are far and away the most important export items—with table grapes and apples dominating.

The United States is the largest market for Chilean agricultural exports, taking roughly 40 percent of the total.

Trade policy and prospects

Chile's trade policy emphasizes exports and imposes some restrictions on imports. Those restrictions include:

- A 15-percent ad valorem tariff on the value (c.i.f. basis) of all imports;
- A variable import surtax that effectively allows only residual imports of wheat and oilseeds;
- A price band policy on wheat, sugar, and vegetable oil that protects domestic production from lower priced international commodities; and
- Favorable tariff treatment for Latin American neighbors on such agricultural commodities as cotton, tobacco, vegetable oil, and soybean meal. ■

China

C

Profile of agriculture

China has just over one-fifth of the world's population (1.1 billion) but only 7 percent of the world's arable land. Agriculture is a key sector of the economy: farmers account for 58 percent of the labor force, and 74 percent of the people live in rural areas.

China is the world's largest producer of rice, pork, cotton, tobacco, and eggs, as well as a leading producer of coarse grains, oilseeds (peanuts, soybeans, and rapeseed), wheat, apples, citrus, and walnuts. The staple foods are wheat in northern China and rice in central and southern China, but consumers can avail themselves of an increasing array of fresh and processed agricultural products.

Livestock production is constrained by inefficiencies in management and feed production. Pork accounts for over 80 percent of total meat output. The hog sector is dominated by small producers who use table scraps and straight grain rations to raise four or fewer hogs.

Poultry meat, eggs, beef, mutton, milk, and aquaculture have all grown rapidly as the Government has attempted to stretch scarce grain resources by emphasizing animals that are grass-fed or that convert feed more efficiently than hogs.

Agricultural Production

	1989/90	*1990/91*[1]
	mil. metric tons	
Crop production		
Apples	2.5	[2]
Corn	78.9	88.0
Cotton	3.8	4.2
Peanuts	5.3	5.8
Rapeseed	5.4	6.6
Rice	180.0	185.0
Soybeans	10.2	11.5
Sugar beets	9.4	10.8
Sugarcane	53.0	55.0
Tobacco	2.8	2.7
Wheat	91.0	96.5

	1989	*1990*
	mil. head	
Livestock numbers		
Cattle	100.8	103.0
Modern dairy	2.5	2.8
Goats	98.1	102.0
Hogs	52.8	355.0
Poultry, layers[3]	1,040.0	1,050.0
Sheep	113.5	113.0

		mil. metric tons
Animal product output		
Eggs[3]	7.2	7.4
Meat, total	26.3	27.0
Beef	1.1	1.2
Mutton and goat	1.0	1.1
Pork	21.2	21.4
Poultry[4]	2.8	3.0
Milk, total	4.4	4.6
Cow's milk	3.8	4.0

[1] *Estimate.*
[2] *Not available.*
[3] *Includes chicken, duck, and quail.*
[4] *Includes chicken, duck, quail, turkey, and others.*

Production highlights

Consecutive record grain crops in 1989 and 1990 reversed a downward trend in production that began in 1985. Good weather, higher Government producer prices, and improved availability of inputs led to increases. Rice, wheat, and corn accounted for 48, 25, and 23 percent, respectively, of total 1990 grain production.

Cotton production recovered in 1990, spurred by higher state producer prices, increased state support of inputs, and generally good weather.

Oilseed production—particularly soybeans, rapeseed, and peanuts—increased in 1990 compared with 1989. Major soybean-producing areas recovered from drought in 1989, and rapeseed avoided the winterkill in 1988 and 1989.

Tobacco production declined slightly in 1990 as the Government stressed the importance of grain and cotton production to the national economy.

China at a Glance

Population (1990): 1.13 billion
Urban population: 26%
Population growth rate: 1.4%
Per capita gross domestic product (1989): $300
Total land area: 9.6 million square kilometers; 10% arable
Major crops: Rice, wheat, corn, sugarcane and sugar beets, soybeans, rapeseed, peanuts, cotton, tobacco, sorghum, apples, mandarin oranges, pears, walnuts
Livestock sector: Hogs, poultry broilers and layers, cattle (mostly draft, but some dairy and beef), sheep, goats, aquaculture
Leading agricultural exports: Corn, soybeans, soybean meal, peanuts, live hogs, pork, frozen shrimp, refined sugar, tea, silk, cotton, canned vegetables and fruits
Leading agricultural imports: Wheat, rice, cotton, wool, raw sugar, soybean oil, palm oil, rapeseed oil, softwood logs
Agricultural imports as a share of total imports (1989): 13%
U.S. share of total agricultural imports (1989): 27%
Percent of labor force in agriculture (1988): 58%
Membership in economic or trade organizations: Observer status at GATT

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal genetics	11	45
Cotton	713	44
Raw sugar	397	0
Rice	304	[2]
Softwood logs	538	49
Tobacco	54	[2]
Vegetable oils	835	2
Wheat	2,581	55
Wool	517	[2]
All agricultural products [3]	7,623	27

[1] *China Customs reports trade data in U.S. dollars.*
[2] *Less than 0.5%*
[3] *Includes forest products and other products not listed.*

The output of all major livestock products increased to record levels in 1990, but the rate of growth was down significantly from that of the previous 5 years. Farmers were aided by lower corn prices. The poor economic situation slowed growth in consumer demand for pork, beef, mutton, and poultry meat.

Farm and food policy

Although many agricultural products have been freed from state control, commodities considered essential to the economy or to social stability—such as major grains and cotton—remain subject to partial production quotas and state controls on marketing and distribution.

China's eighth 5-Year Plan (1991-95) seeks to further increase grain production while implementing some modest market-oriented reforms. In October 1990, China opened its first "forward" grain (wheat) market at Zhengzhou in Henan province as an experimental first step.

If the experiment is successful, other grain and livestock markets will probably open at key producing areas throughout the country, with the ultimate goal of evolving into futures trading markets.

The two successive bumper grain harvests have depressed market prices and brought to light significant inadequacies in storage facilities. China plans to increase its grain storage capacity by 25 million tons over the next 5 years and has announced minimum "protection" prices for selected types of grain to stabilize market prices and provide a guaranteed minimum price to farmers.

In addition, the newly created National Grain Reserve system would release grain in times of shortage or purchase in surplus years to reduce market price fluctuations.

The greatest advance in food production since the 1978/79 reforms is the provision of an increased variety and supply of vegetables, fruits, and livestock products to rural and urban dwellers. The increased freedom to produce what the market demands and the growth of specialized farm households that concentrate on profitable fruit, vegetable, tobacco, aquaculture, hog, or poultry production has led to rapid increases in output.

The "Food Basket" program has spurred growth in vegetable, meat, egg, and milk production in rural areas surrounding medium and large cities. Livestock production in these areas is centered on large state farms with medium- to large-scale semimodern facilities and specialized households using simpler technology.

Imports and exports

China is a net agricultural exporter with sales of $9.7 billion in 1989 versus imports of $7.6 billion.

The country supplies markets in the Far East with corn, soybean and other meals, fresh fruits and vegetables, pork, and poultry meat. Hong Kong takes sizable quantities of eggs and live cattle, hogs, and poultry. China ships canned vegetables and fruits and frozen shrimp around the globe.

The major agricultural imports are wheat, rice, cotton, wool, raw sugar, vegetable oils, and softwood logs.

In 1989, China's major agricultural imports from the United States were wheat and cotton, valued at $1.4 billion and $313 million (cost, insurance, and freight basis), respectively. China is also an important destination for U.S. cattle hides, poultry breeding stock, and chicken feet and wings. Imports of U.S. forest products totaled $265 million, of which softwood logs accounted for $262 million.

Trade policy and prospects

Although the main goal of Chinese agriculture is self-sufficiency, factors such as limited arable land, a population growth rate of 17 million people per year, and increasing consumer demand necessitate imports. When China does import, foreign exchange constraints make it a price buyer of bulk commodities such as grain, vegetable oils, and cotton.

Central planning is used to establish import requirements or export availabilities of grain, protein meals, sugar, wool, and cotton, although provinces can place import orders through the appropriate state trading company. Imports of most agricultural commodities are subject to a licensing process or must be carried out through the appropriate state trading company.

China is the world's largest vegetable oil importer, but the Government increased oil import duties in 1990 to protect domestic production and reduce dependence on imports.

High-value consumer product imports are highly restricted to conserve foreign exchange. ■

Colombia

C

Profile of agriculture

Colombia recently surpassed Argentina to become the third most populous Latin American nation after Brazil and Mexico.

Agriculture accounts for more than 20 percent of Colombia's gross domestic product and usually provides around 50 percent of its total export earnings. About half of Colombia's agricultural output comes from modern, commercial-sized farms; the other half is produced on small peasant farms using traditional methods.

Because of Colombia's diverse climate and topography, various crops can be grown. Cocoa, sugarcane, coconuts, bananas, plantains, rice, cotton, tobacco, cassava, and most of the nation's cattle are produced in the hot regions—from sea level to 3,300 feet.

The temperate regions—3,300 to 6,600 feet—are better suited for coffee, flowers, corn, certain vegetables, and fruits such as citrus, pears, pineapples, and tomatoes. Higher elevations—6,600 to 9,900 feet—produce wheat, barley, potatoes, cold-climate vegetables, dairy cattle, and poultry.

Colombia is about 90-percent self-sufficient in food. It must import wheat, pulses, and malting barley. On occasion, it also imports small quantities of feed grains, protein meals, vegetable oils, and powdered milk.

Agricultural Production

	1989	*1990*[1]
	thous. metric tons	
Crop production		
African oil palm fruit	1,222	1,223
Bananas	1,102	1,090
Coffee [2]	642	800
Corn	1,043	1,160
Flowers	92	106
Plantains	2,550	2,713
Potatoes	2,500	2,400
Rice, milled	1,366	1,181
Sorghum	695	750
Soybeans [2]	177	212
Sugar, raw [2]	1,523	1,575
Yucca	1,541	1,714
	mil. head	
Livestock numbers		
Cattle		
Beef	10.9	9.9
Dairy	5.9	6.2
Hogs	2.2	2.1
Poultry		
Broilers	155.0	159.1
Layers	21.0	21.6
	thous. metric tons	
Animal product output		
Beef and veal	751	796
Eggs	4,946	5,160
Milk	3,630	3,766
Pork	126	118
Poultry meat	291	299

[1] *Estimated.*
[2] *Data for marketing years 1988/89 and 1989/90; Oct.-Sept. for coffee and soybeans, and Sept.-Aug. for sugar.*

Production highlights

The agricultural sector's growth rate in 1990 was about 5 percent, compared with 6 percent in 1989. Frozen support prices and uncertainty over other policy changes caused many farmers to trim back expansion plans.

The world's second largest coffee producer, Colombia produces 12 to 15 percent of the world's coffee. Production rose sharply in 1990, up almost 25 percent from 1989, because of better weather and an increase in the area planted.

Bananas, on the other hand, were hit by bad weather, including unseasonal heavy rains and hurricanes. Production dropped 1 percent in 1990.

Growth in palm fruit and palm kernel production slowed significantly because trees planted 4 years earlier (when subsidies were offered to promote African palm) all came into production by 1989, and there has been no increase in the number of trees since then.

Potatoes are a staple of the Colombian diet; production dropped in 1990 because a good 1989 crop led to low

Colombia at a Glance

Population (1990): 33.1 million
Urban population: 65%
Population growth rate: 1.9%
Per capita income (1990): $1,500
Total land area: 1,038,700 square kilometers; 11% crop use, 38% animal production, 4% mixed, 2% other agricultural uses
Major crops: Plantains, potatoes, yucca, sugar, African oil palm fruit, rice, corn, bananas, coffee, sorghum, soybeans, yams, cotton, beans, barley, flowers, wheat, cocoa (dried fruit)
Livestock sector: Beef cattle, dairy, poultry, hogs
Leading agricultural exports: Coffee, bananas, cut flowers, sugar, cotton
Leading agricultural imports: Wheat, oilseeds and products, barley malt, tallow, apples, wool, barley, dry peas, lentils
Agricultural imports as a share of total imports (1989): 7%
U.S. share of total agricultural imports (1990): 43%
Percent of labor force in agriculture: 30%
Membership in economic or trade organizations: ALADI, Andean Pact, Cairns, GATT, OAS

Value of Agricultural Imports, 1990[1]

	Total imports	*U.S. share*
	$ mil.[2]	*%*
Selected products		
Apples	18	15
Barley	12	0
Barley malt	25	80
Lentils	10	10
Oilseeds and products	70	55
Soybeans	8	0
Peas	10	30
Tallow	20	100
Wheat	100	80
Wool	14	1
All agricultural products	328	43

[1] *Estimated.*
[2] *Based on February 1990 monthly average exchange rate of U.S.$1=451.7 Colombian* pesos.

prices, and farmers reduced their plantings in 1990.

Grain production was fairly good in 1990. Corn, sorghum, barley, and wheat increased; however, rice production fell 14 percent because farmers cut back after having difficulty marketing the 1989 bumper crop. Another reason for reduced rice production was poor yields in the eastern plains, where rice is a newcomer and yields fluctuate.

Flower production increased 15 percent because of the growth in Colombia's export markets in the United States, Europe, and Japan.

In 1990, cattle producers were hard hit by high costs of production, stagnant meat prices, and guerrilla demands for payments from ranch owners. As a result, many producers reduced their herds in 1990. Beef production increased 6 percent as producers sent more animals to market.

Production of poultry meat also increased, but expansion was limited because beef was cheaper.

Farm and food policy

In 1990, a new President took office and promised significant changes in agricultural policy. One immediate change was to hold support prices at existing levels. In the past, the Government had usually raised support prices twice a year (there are two crops) for wheat, corn, rice, malt barley, sorghum, soybeans, beans, and sunflowers. In 1989, support prices were set high enough to ensure profits.

The new administration set support prices at levels that covered only the costs of production (not including land rent). This change was instituted to promote more efficient use of farm resources and to save the Government money.

Other actions to promote efficiency are being discussed, including encouraging wheat and barley producers to gradually shift to milk, oats, and potatoes. Because of Colombia's climate, wheat and barley are difficult to produce efficiently.

Additional plans call for the elimination of subsidies on agricultural loans, so that farmers will begin paying commercial interest rates. In return, red tape will be reduced and more loan funds made available.

Imports and exports

Colombia's agricultural exports in 1990 were estimated at $2.3 billion, compared with $328 million in imports. The most important exports are coffee, bananas, and cut flowers; the country imports wheat, oilseeds and products, tallow, barley, barley malt, sorghum, lentils, dried beans, dried peas, chickpeas (garbanzos), and some deciduous fruits.

U.S. agricultural exports to Colombia in 1990 totaled $142 million, down $3 million from 1989 because of reduced soybean imports.

The principal U.S. exports to Colombia in 1990 were wheat, $80 million; tallow, $20 million; barley malt, $20 million; dry peas, $3 million; and apples, close to $3 million.

Exports to the United States were estimated at $690 million in 1990, about 30 percent of Colombia's total agricultural exports.

Trade policy and prospects

In 1990, as part of its new program to make the economy more responsive to international and domestic market forces, the Government began to lower import tariffs, remove license requirements, and eliminate quotas.

However, to protect Colombia's farmers from competition with subsidized imports, this policy will not be applied to milk, grains, flours, and oilseeds and products. Variable import tariffs will be established for these goods, in a system patterned after Chile's.

In the past, the only entity permitted to import nonperishable bulk commodities has been the Colombian Agricultural Marketing Board. Once the system of variable levies has been implemented, importing activity will be transferred substantially or wholly to the private sector.

The Government provides export assistance to a number of products through a rebate on commercial income taxes. In line with the new policy of exposing domestic industries to greater competition, this export subsidy will be reduced gradually over 4 years until it is eliminated.

Colombia makes tariff concessions for agricultural products from Andean Pact countries and Latin American Integration Association (ALADI) countries.

If Colombia continues to liberalize its trading rules, the market for processed foods and bulk commodities could grow. ■

Costa Rica

C

Profile of agriculture

Agriculture is Costa Rica's most important economic sector. It produces more than 60 percent of the country's exports, employs about 27 percent of the labor force, and contributes 20 percent of the gross domestic product.

A politically stable Central American country of nearly 3 million people, with a territory about the size of West Virginia, Costa Rica has a tropical climate, well suited for the country's main agricultural products of coffee, bananas, sugarcane, cattle, tropical fruits (pineapples, melons, mangoes, papayas), flowers and ornamental plants, rice, white corn, and beans.

Production highlights

Coffee and bananas are Costa Rica's most important agricultural products. Coffee production, concentrated mainly in the central highlands, totaled 2.45 million 60-kilogram bags during the 1989/90 marketing year, down from the previous year. This sector was affected by lower international prices following the collapse of the International Coffee Agreement in mid-1989. However, a large number of new coffee trees have been planted during the past few years.

Banana production has increased steadily over the past few seasons, and almost all harvested production is exported. Banana production is concentrated in the Atlantic zone of the country, but plantations are being started or rehabilitated in the southern Pacific area as well.

Production of beef has declined since 1987 because of financial problems such as high interest rates and large debts. Cattle numbers were declining, but a slow rebuilding of the herd began in 1990. Beef is the third largest agricultural export of Costa Rica, after bananas and coffee.

Pineapple production has become an important activity. Most of the production is exported to the United States. Other tropical products, such as melons, papayas, chayotes, and yucca, are being produced and exported in larger quantities.

The citrus industry continues to expand. Costa Rica exports orange juice concentrate, mostly to the United States. This activity is more lucrative than coffee production, and orange plantations are replacing coffee trees in some marginal areas.

Costa Rica achieved self-sufficiency in rice production during 1990, but drought in the second half of the year reduced the harvest slightly. Surpluses of white corn, mainly consumed in the form of tortillas, were produced during the 1989/90 crop year. Bean production was lower than expected, mostly because of the lack of price incentives for producers.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production [1]		
Bananas	1,027	1,224
Beef	81	82
Coffee	165	147
Corn	85	80
Rice	170	225
Sugar	224	230
	thous. head	
Livestock numbers		
Cattle		
Beef	993	995
Dairy	224	225

[1] *Crop years are Jan.-Dec. for bananas and beef, Oct.-Sept. for coffee and sugar, and July-June for corn and rice.*

Costa Rica at a Glance

Population: 2.95 million
Urban population: 49%
Population growth rate: 2.4%
Per capita income: $1,655
Total land area: 50,660 square kilometers; 6% arable land, 7% permanent crops, 45% meadows and pastures, 34% forest, 8% other agricultural uses (includes 1% irrigated)
Major crops: Coffee, bananas, sugarcane, tropical fruits, rice, white corn, beans
Livestock sector: Beef, dairy, poultry, hogs
Leading agricultural exports: Bananas, coffee, beef, pineapples, ornamental plants, cut flowers, sugar, cocoa
Leading agricultural imports: Wheat, yellow corn, soybeans, dry beans
Agricultural imports as a share of total imports: 9%
U.S. share of total agricultural imports: 55%
Percent of labor force in agriculture: 27%
Membership in economic or trade organizations: CACM, GATT, IBRD, IDB, IFAD, IFC, IMF, IWC, OAS, ODECA

Farm and food policy

One of the main goals of the present Government is to achieve self-sufficiency in the production of rice, beans, and white corn, as well as to maintain self-sufficiency in the production of other basic products such as milk. The Government has tried to set producer prices at levels that will provide incentives for production. However, higher producer prices have resulted in higher consumer prices, provoking opposition from the public.

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beans	6.5	2
Candies[2]	3.8	8
Condensed milk	3.5	0
Corn	21.0	100
Cotton	3.1	92
Dry cereals	3.5	5
Fruits, fresh and preserved	4.0	54
Fruit and vegetable juices	2.5	8
Malt (including roasted)	2.8	0
Sauces and condiments	4.5	3
Starch and fecula	2.2	53
Soybeans	20.0	100
Vegetables, preparations[3]	3.0	7
Wheat	26.0	100
All agricultural products	170.0	55

[1] *Values were projected in U.S. dollars. The average exchange rate in 1990 was U.S.$1=92.7 colones.*
[2] *Without chocolate.*
[3] *Preserved without vinegar or acetic acid.*

Bean, rice, flour, milk, sugar, and other commodity prices were raised after May 1990 in an attempt to reflect the real production cost of these products. The present administration is reducing the role of the National Production Council in the marketing of grains by allowing the private sector to import yellow corn without import licenses.

Imports and exports

Costa Rica is a net agricultural exporter, with sales of $900 million in 1990 versus imports of $170 million. Agricultural exports (mainly to the United States and the European Community) increased an estimated 5 percent in value in 1990. Agricultural imports, mostly from the United States, increased in volume but showed little change in value in 1990.

Costa Rica's exports of agricultural products have experienced strong growth during the past few years. In 1989, the country exported $400 million worth of agricultural products to the United States, compared with $346 million during 1988. Costa Rican agricultural exports to the United States and other markets increased further in 1990.

Coffee exports during 1989 reached $286 million, while banana exports amounted to $280 million. It is expected that banana exports continued to increase in 1990 and surpassed coffee as the largest agricultural export. Coffee exports fell in value in 1990 because of lower prices.

Beef exports during 1989 declined to $48.5 million from $51 million the previous year because of lower domestic production. Almost 100 percent of the beef is exported to the United States. Exports in 1990 were down slightly.

Pineapple is another major export crop. The climate in several areas of the country is ideal for pineapple production. The value of exports during 1989 increased to $39.7 million from $31 million in 1988, but exports decreased in 1990, partly because of insect problems.

In 1989, Costa Rica's main imports were wheat, yellow corn, soybeans, rice, and black beans. The United States supplied 100 percent of the imports of all but black beans.

Trade policy and prospects

The Costa Rican Government is committed to a policy of promoting exports, with an emphasis on nontraditional agricultural products. Export growth continued during 1989 and 1990, but at a slower rate than during the mid-1980's. The Government issues tax credit certificates, which provide tax benefits to exporters of some nontraditional products. Under an agreement with the World Bank, these benefits will decline sharply over time.

The Government protects domestic producers with import tariffs, import permits, consumption and fixed taxes, and other nontariff barriers such as the import deposit requirement. However, Costa Rica has signed an agreement with the World Bank under which it agreed to reduce tariffs to a maximum of 40 percent with some exceptions.

Tariff reductions have taken place gradually since May 1989 for a number of commodities, including high-value agricultural products. Beginning in November 1990, the Government also eliminated the import permit requirements on yellow corn, thus allowing the private sector to import directly.

At the close of 1990, most yellow corn, all soybeans and soybean products, and almost all high-value product imports were being made by the private sector. All wheat imports continue to be made by the Government.

The country became a member of the GATT in November 1990; lower tariffs should result in the future.

Costa Rica also signed a bilateral trade and investment framework agreement with the United States in November 1990 as a step toward a possible free trade agreement under the Enterprise for the Americas Initiative. ■

Côte d'Ivoire

C

Profile of agriculture

Agriculture accounts for about 30 percent of the country's gross domestic product and provides employment for about 53 percent of the population. Major export crops are cocoa, coffee, cotton, rubber, tropical hardwoods, pineapples, bananas, and vegetables.

Côte d'Ivoire is self-sufficient in food crops such as cassava, yams, cocoyams, and plantains; however, it continues to import grains such as rice and corn to supplement local production. Imports meet all domestic requirements for wheat.

Côte d'Ivoire is the world's largest producer of cocoa and the fourth largest producer of coffee. These two products account for about 60 percent of total export earnings, and the economy has been hit hard by falling world market prices for these commodities. Severe recession has resulted in the inability to meet external and internal debt obligations.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production [1]		
Bananas	130	114
Cassava	1,450	1,500
Cocoa	849	710
Coffee	239	284
Corn	490	470
Cotton	291	240
Palm fruit	982	1,062
Peanuts (in shell)	136	140
Pineapples	210	200
Plantains	1,100	1,200
Rice	670	675
Yams	2,600	2,650
	thous. head	
Livestock numbers		
Cattle	150	175
Pigs	234	245
Sheep and goats	448	465
	thous. metric tons	
Animal product output [2]		
Beef	16.4	16.7
Eggs	13.6	11.2
Milk	16.0	16.0
Pork	7.2	7.3
Poultry meat	18.4	18.9

[1] *Crop years are Jan.-Dec. for all commodities except cotton, coffee, and cocoa, which are Oct.-Sept.*
[2] *1990 estimated.*

Production highlights

Food crop production rose by 2 percent in 1990, and preliminary estimates indicate another increase in 1991. The primary reasons for increased production are continued area expansion, increased use of improved seeds, and greater Government support for food production.

Tuber crop production is generally adequate to satisfy the domestic market, but availability throughout the year is impaired by lack of facilities for preservation, transport, and conditioning.

Rice production increased in 1989 as a result of sufficient rainfall, area expansion, improved technical supervision, and increased use of improved seeds. Production was up only moderately in 1990, as drought early in the year limited gains.

Corn production increased in 1989 but fell in 1990 as drought reduced yields and caused some cultivable areas to be abandoned.

Vegetable production increased in 1989 and probably continued increasing in 1990 as a result of improved technical assistance and favorable market prices. Major products are eggplants, tomatoes, cabbages, okra, pimientos, and shallots.

Export crop production rose by 4.6 percent in 1989 because of record cocoa, rubber, and cotton crops and an increase in coffee production. Continued Government investment in agriculture and returns from previous investments probably contributed to a growth of 2 percent in export crop production in 1990.

Coffee production has been increasing as a result of improving yields from a Government program to prune aged trees. Cotton production increased in 1989 because of area expansion, efficient technical supervision, good producer prices, and favorable weather.

Côte d'Ivoire at a Glance

Population (1989): 11.2 million
Urban population: 45%
Population growth rate: 3.8%
Per capita income (1989): $813
Total land area: 322,365 square kilometers; 11% cultivated
Major crops: Cocoa, coffee, cotton, rubber, pineapples, bananas
Livestock: Cattle, hogs, poultry, sheep
Leading agricultural exports: Cocoa, coffee, cotton, rubber, palm oil, pineapple
Leading agricultural imports: Rice, wheat, meat, milk, vegetables, tobacco
Agricultural imports as share of total imports: 20-25%
U.S. share of total agricultural imports: 3-5%
Percent of labor force in agriculture: 53%
Membership in economic or trade organizations: ACP, ECOWAS, GATT, IBRD, IMF

Value of Agricultural Imports, 1988

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beef	24	[2]
Beef offals	4	15
Cattle, sheep, goats	41	[2]
Corn	5	86
Dairy products	83	[2]
Horticultural products	40	4
Poultry	7	29
Rice	68	7
Tobacco	21	18
Wheat and flour	37	[2]
Wine	11	[2]
Total	425	4

[1] *Values are shown in U.S. dollars at U.S.$1=283 francs.*
[2] *Zero or no available data.*

However, insufficient rainfall in 1990 caused production to fall.

Rubber production increased in 1989 and 1990 as a result of more planted areas coming into maturity, efficient technical assistance, adequate credit for farmers, and attractive producer prices. Banana production increased in 1989 because of favorable rainfall and technical supervision. Drought in the major producing areas reduced production in 1990. Commercial production of tobacco increased in 1989/90 because of continued technical assistance, free fertilizers and seeds, and credit facilities for the construction of drying barns.

There was a slight increase in livestock production in 1989 because of an increase in beef production. High levels of subsidized European meat imports and falling consumer incomes continue to affect local output.

Farm and food policy

The Government is heavily involved in all aspects of Ivorian agriculture. Recently, however, severe domestic economic problems, combined with pressure from international lending organizations, have resulted in efforts to liberalize the economy and to privatize some parastatals.

Government policy is designed to encourage self-sufficiency in food production and to protect natural resources and forests. Specific goals are to increase food crop production, especially rice; to develop rural areas; to modernize agriculture; to diversify agricultural activities; to guarantee producer prices; and to promote investment in agriculture.

Reforestation has received more emphasis as the Government attempts to halt the destruction of forests and to maintain the ecosystem. In 1990, the Government allocated 41 percent of the capital budget to agriculture.

Imports and exports

Côte d'Ivoire is a net agricultural exporter, with sales for the first 11 months of 1989 estimated at $1.3 billion versus purchases of $398 million.

Agricultural exports in 1989 were down from the year before because of lower cocoa and coffee export prices. Cocoa and coffee accounted for 40 and 20 percent, respectively, of total agricultural exports. Other exports included cotton, rubber, vegetable oil products, pineapples, and bananas.

Agricultural imports in 1989 are estimated to have fallen slightly from 1988. The principal items imported were rice, wheat, beef offals (liver), animals, beverages, tobacco, and horticultural products.

Rice and wheat imports increased in 1989 and are expected to continue increasing in 1990 to feed the rising urban population. All other product imports fell in 1989 because of poor economic conditions. The ban on poultry imports initiated by the Government in 1989 is still enforced.

Trade policy and prospects

All rice imports are controlled by the Government. Import licenses are required to import high-quality consumer packaged rice, and low-quality bulk rice is imported directly by the Ministry of Trade.

Recently the Government granted licenses for the import of limited quantities of brown rice, which has resulted in U.S. exports of over 30,000 tons of brown rice. Results from the initial sales were highly satisfactory, leading to an anticipation of larger sales in the future.

In 1990, Côte d'Ivoire had access to a $15 million U.S. Food for Peace Program, which resulted in the delivery of 57,000 tons of U.S. long-grain rice. Flour mills in Côte d'Ivoire have recently begun buying small quantities of U.S. wheat for blending with French wheat, and purchases of U.S. wheat are expected to increase in 1991. ■

Czechoslovakia

C

Profile of agriculture

Agriculture contributes about 20 percent to Czechoslovakia's national income and employs 12 percent of the labor force.

The crop sector contributes around 40 percent of total agricultural output. Major commodities include wheat, barley, potatoes, sugar beets, forage crops, corn, rapeseed, oats, rye, fruit, vegetables, and sunflowerseed.

The livestock sector chiefly consists of hogs, cattle, dairy production, and poultry. Czechoslovakia is self-sufficient in poultry, but its efficiency depends on the supply of protein feeds, particularly soybean meal.

Former state monopolies still control much of the agricultural production and trade, as well as sales of agricultural inputs. Cooperatives or the state own nearly all the farms and 95 percent of the agricultural land.

Cooperatives have been the most important segment of Czechoslovakian agriculture. In 1989, the 1,600 farm cooperatives had an average of 2,630 hectares each. State farms are fewer in number, but larger in size. In 1989, the average size of the 245 state farms was 5,922 hectares.

Private farms that exist are small and are mainly engaged in labor-intensive production activities, such as fruits and vegetables or livestock. However, Czechoslovakia is expected to adopt a land law that will allow private ownership of farmland and permit land that was confiscated in 1948 to be returned to its original owners.

The transformation to a market economy could have a major impact on farm structure over the next few years. The future structure is likely to be influenced by the country's long tradition of cooperative agriculture, the large investments in machinery and other equipment required to run family farms, and the willingness of people to become farmers.

One trend already evident is the division of large state and cooperative farms into more manageable units.

Production highlights

Czechoslovak agricultural output dropped 3.4 percent in 1990, with crop production down 4.7 percent and livestock production off 2.5 percent from 1989. The decline was mainly due to a summer drought, which sharply reduced fruit and vegetable output.

The grain harvest was a record-high 12.6 million metric tons, with increases for wheat, rye, barley, and oats offsetting a reduction for corn. The overall production increase for grain was

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Barley	3,550	4,051
Corn	1,000	508
Fruit	825	531
Oats	330	414
Potatoes	3,167	2,676
Rye	708	719
Rapeseed	387	376
Sugar beets	6,389	5,374
Vegetables	1,200	980
Wheat	6,356	6,715

	1988	*1989*
	thous. head	
Livestock numbers[1]		
Cattle	5,075	5,129
Cows	1,815	1,795
Hogs	7,384	7,498
Horses	44	42
Poultry	48,899	48,566
Hens	23,827	23,698
Sheep	1,047	1,051

	thous. metric tons	
Animal product output		
Beef and veal[2]	730	732
Butter	148	156
Cheese	146	152
Eggs[3]	5,596	5,628
Milk[4]	6,754	6,888
Pork[2]	1,117	1,143
Poultry[2]	300	307

[1] *As of December 31.*
[2] *Live weight.*
[3] *Million eggs.*
[4] *Million liters.*

Czechoslovakia at a Glance

Population (1990): 15.6 million
Population growth rate: 0.3%
Total land area: 125,460 square kilometers; 37% cropland, 36% forest, 13% meadow and pasture
Major crops: Wheat, barley, potatoes, sugar beets, forage crops, corn, rapeseed, oats, rye, fruits, vegetables, grapes, sunflowerseed
Livestock sector: Hogs, cattle, dairy, poultry
Leading agricultural exports: Meat, alcoholic beverages, dairy products, sugar and sugar products, vegetables, edible roots
Leading agricultural imports: Cotton, fruit and nuts, vegetables, feedstuffs (mainly soybean meal), sugar and honey, wool, alcoholic beverages, tobacco
Agricultural imports as a share of total imports: 6% (includes forest products)
U.S. share of total agricultural imports: 1%
Percent of labor force in agriculture: 12%
Membership in economic or trade organizations: GATT, IMF

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Coffee, tea, cocoa, spices	141	N/A
Cotton	188	1.6
Feedstuffs	212	N/A
Hides and skins	184	8.7
Sugar and preparations	127	N/A
Vegetables and fruit	302	N/A
Wool and animal hair	130	N/A
All agricultural products[2]	1,694	1.3

[1] Values are shown in U.S. dollars at U.S.$1=14.9 CSFR crowns.
[2] Includes products not listed.
N/A = Not available.

attributed to higher yields, as well as to expansion of planted area.

Oil-bearing crop production was up slightly in 1990, as higher production of minor oilseeds offset small output declines for rape and sunflowerseed.

Low sugar beet output in 1990 was attributed to poor seed quality and lack of pesticides. The 1990 crop of 5.4 million tons was insufficient to meet domestic needs.

Livestock production accounted for more than half of total agricultural output in 1990. Production of beef, pork, poultry, and dairy all decreased, following increases in 1989. Milk production dropped 2 percent in 1990 due to dry weather and a tighter forage situation. Czechoslovakia's ability to maintain sufficient livestock production depends on adequate feed availability.

Output of broilers is expected to rise in 1991, while pork output should remain about the same. Consumption of poultry meat is growing, though still comparatively low.

Farm and food policy

The Government of Czechoslovakia has abolished the Federal Ministry of Agriculture and shifted responsibilities to the Ministry of the Economy and to the Czech and Slovak Republic Ministries of Agriculture. This decision was based on nationalistic pressure, the weak showing by the agrarian parties in elections, and the relatively small role of agriculture in the overall economy.

The Government lowered retail food subsidies in July 1990. Although these subsidies kept food prices low and stable, they created price distortions. As an example, some people were buying bread as animal feed because it was so inexpensive. The Government intends to maintain a subsidy for the production of primary agricultural commodities.

Another retail price increase took place in January 1991, when prices were freed for all but essential goods, such as flour and milk. The rise in retail prices is expected to curb consumer demand for beef and milk.

Producer farm price liberalization is expected during 1991.

Imports and exports

Czechoslovakia is a net agricultural importer, with total agricultural purchases in 1989 of $1.7 billion, versus agricultural exports of $0.8 billion.

The leading agricultural exports include meat, alcoholic beverages, dairy products, sugar and sugar products, vegetables, and edible roots.

U.S. agricultural purchases from Czechoslovakia increased from $8 million in 1989 to $12 million in 1990. Hops, beer, pork, and mixed feeds were the principal products.

Czechoslovakia's leading agricultural imports consist of cotton, fruits and nuts, vegetables, feedstuffs, sugar and honey, wool, alcoholic beverages, and tobacco. Agricultural imports constituted a mere 6 percent of Czechoslovakia's total imports in 1989.

U.S. sales to Czechoslovakia were valued at $23 million in 1990, consisting primarily of cotton ($13 million) and cattle hides ($7 million). This low level of U.S. exports reflects Czechoslovakia's emphasis on food self-sufficiency, its lack of most-favored-nation trade status with the United States for most of 1990, and competition from other suppliers.

Trade policy and prospects

A new Czech law grants foreign trading rights to most enterprises. However, because of their lack of trade experience and international contacts, many agricultural firms continue to rely on former state trading organizations. The feed and meat industries are beginning to explore the possibilities of handling their own trade.

Czechoslovakia extends most-favored-nation tariff treatment to western suppliers, but does maintain some import duties and protections. Duty rates on imports of tobacco and sugar are generally under 10 percent, while import duties on beer are high.

Nontariff barriers to imports include hard currency shortages, a temporary 20-percent surcharge, and vestiges of Government dominance over foreign trade. Certain livestock products, poultry meat, hops, and flour are subject to export restrictions.

Czechoslovakia and the United States have implemented a 3-year bilateral trade relations agreement that extends reciprocal most-favored-nation tariff treatment. In addition, Czechoslovakia is eligible for participation in U.S. Government export credit guarantee programs and for U.S. funding for projects aimed at creating a viable private agricultural sector. ■

Denmark

D

Denmark at a Glance

Population (1990): 5.1 million
Urban population: 84%
Population growth rate: Negligible
Per capita income (1989): $19,780
Total land area: 43,000 square kilometers, 50% crop use, 15% animal production
Major crops: Cereal, root crops
Livestock sector: Dairy cattle, swine
Leading agricultural exports: Meat, dairy products, fish, furs
Leading agricultural imports: Oilseeds, grain, animal feedstuffs, wood, and paper
Agricultural imports as share of total imports: 10%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 6%
Membership in economic or trade organizations: EC, GATT, OECD

Profile of agriculture

Agriculture remains an important component of Denmark's overall economic picture, accounting for roughly 9 percent of the country's gross domestic product and employing about 5 percent of the total work force.

Danish agricultural production today meets the demands for approximately 15 million people—or three times the country's population. Each Danish farmer produces enough to satisfy the food demands of about 115 people, compared with only 27 in 1950.

There are an estimated 78,000 farms in Denmark, and the average farm size in 1988 was just over 31 hectares. There has been a marked trend toward simpler farming systems and more specialization. Education, quality control systems, a high degree of organization, and cooperative approaches to agricultural production and processing account for Denmark's past successes and form the basis of its competitiveness.

Denmark's flat, rolling terrain, mild winters, cool summers, and strong prevailing westerly winds make most of its area productive. Unlike other Nordic countries, roughly two-thirds of the land is arable.

About 56 percent of the arable land used for crops is devoted to cereals, mostly barley and wheat. Another 24 percent is taken up by roughage and fodder production. Cash crops (mainly potatoes, sugar beets, seeds, and pulses) account for another 18 percent, and the remainder is devoted to horticultural crops or is fallow.

Approximately 73 percent of the average Danish farmer's income is derived from livestock production. While most fodder is domestically produced, almost 90 percent of the protein requirements for livestock are imported. Of Denmark's total livestock population of 30.5 million (June 1988 census), about 80 percent consists of pigs, broilers, laying hens, and dairy cattle.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Barley	4,959	4,984
Industrial seed	655	792
Oats and mixed grains	125	121
Pasture and grass/feed	19,837	20,411
Potatoes	1,238	1,483
Pulses	475	551
Root crops for feed	6,908	6,827
Rye	487	544
Sugar beets	3,309	3,533
Wheat	3,224	3,953
	thous. head	
Livestock numbers		
Cattle	2,221	2,239
Beef	72	87
Dairy	759	753
Hogs	9,190	9,497
Poultry (layers)	4,048	4,327
Sheep	144	159
	thous. metric tons	
Animal product output		
Beef and veal	222	220
Butter	94	92
Cheese	260	277
Eggs	79	82
Milk	4,739	4,747
Mink furs [1]	12,533	9,500
Pork	1,218	1,214
Poultry meat	117	128

[1] *Thousands.*

Production highlights

In 1990, gross income in agriculture is estimated to have decreased by $362 million to $3.4 billion as lower prices more than offset larger output.

The value of production in the important livestock sector decreased by about $480 million to $5.9 billion in 1990. Production of milk and beef declined by 2 percent, while veal production declined by 1 percent.

The value of pork production increased slightly despite declining prices. There were similar slight gains in cash receipts for other animal products, including furs.

Because of larger quantities and lower prices, the value of vegetable production increased by about $50 million. Prices of pulses and seeds for processing showed a decline of nearly 15 percent, because of European Community (EC) stabilizers. The fall in

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Feedstuffs (mainly oilmeals)	601	4
Fruits and vegetables	421	6
Grains and products	174	32
Oilseeds	42	50
Tobacco and products	90	45
All agricultural products[2]	2,800	4

[1] Values are shown in U.S. dollars at U.S.$1=7.31 kroner. Includes commercial and concessional imports.
[2] Includes products not listed. Excludes forest products.

cereal prices of 5 to 10 percent was a continuation of recent trends.

Farm and food policy

Denmark is the only Nordic country that is a member of the EC, which provides considerable financial support (nearly $1.5 billion in 1990). The EC's Common Agricultural Policy determines Denmark's agricultural production policies.

Price supports are used to maintain farmers' incomes. Although the method of price support varies somewhat from product to product, certain basic concepts are nearly universal.

Internal prices are maintained in three ways. First, levies and duties on imported commodities that compete directly with Danish production are set high enough to ensure that those commodities cannot be sold at prices less than the EC support level. Second, intervention buying is used to tax excess supplies out of the market and strengthen prices. Finally, the EC grants export subsidies to allow surpluses to be sold on the world market.

Imports and exports

Denmark relies on export outlets for approximately two-thirds of its total agricultural output, and this proportion rises to 70 to 80 percent for such products as cheese, beef, and pork.

Agricultural products account for about 25 percent of Denmark's total export earnings. Other EC members typically take 50 to 60 percent of the country's agricultural exports. In 1989, the country ran a surplus of nearly $4 billion in its agricultural trade, with exports totaling a record-high $6.5 billion and imports, $2.8 billion.

Major exports in 1989 were dairy products, beef, veal, pork, grains, sugar, and animal products. Pork products alone account for nearly 36 percent of Denmark's total agricultural exports. In 1989, pork exports increased 1.5 percent. A decrease in canned pork exports was offset by increased exports of fresh pork.

Exports to the United Kingdom, Denmark's largest pork export market for canned and fresh products together, increased by more than a third. Sales to the United States decreased slightly, while sales to Japan increased by 7 to 8 percent. In 1990, Japan is thought to have been the largest market (in value) for fresh and frozen Danish pork.

The export value of dairy products increased by 10 percent in 1989 as market conditions improved over 1988. Cheese sales in particular showed sharp gains. Demand increased within the EC, and exports of feta cheese to Iran increased by 50 percent.

Beef and veal exports increased by nearly 6 percent in value, with a gain of more than 20 percent to Italy, Denmark's principal beef and veal market.

Exports of all crop products increased 4 percent in value during 1990. Exports of grains remained unchanged at the relatively high level of 1989, with prices essentially unchanged.

Danish agricultural imports rose to $2.8 billion, with the United States holding a 4-percent share of the market. Denmark's principal imports were feedstuffs, fruits and vegetables, grains, oilseeds, and tobacco.

Imports of grains and grain products declined in 1989, while purchases of oilseeds, feedstuffs, and tobacco rose.

Trade policy and prospects

As a member of the EC, Denmark's trade policy uses a system of variable import quotas, import levies, sluicegate prices, duties, and sanitary provisions to restrict access to its market. By the end of 1992, the EC single market will ease trade among member states, including transfers of imports from third countries. ■

Dominican Republic

D

Profile of agriculture

The Dominican Republic, the larger of two countries sharing the island of Hispaniola, is endowed with a diverse topography. Several mountain ranges and fertile valleys traverse the northern two-thirds of the island from east to west. The southwestern corner of the country is mostly desert, while the eastern portion is flat and overgrown with subtropical vegetation. Abundant rainfall across most of the country allows year-round agricultural production with a limited amount of irrigation.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Beans	81	73
Cassava	111	98
Cocoa	44	58
Coffee	726	759
Plantains[1]	1,141	627
Rice	308	315
Sugar	735	620
Tobacco	17	21
	thous. head	
Livestock numbers		
Cattle		
Beef	248	248
Dairy[2]	152	152
Hogs	293	306
Poultry		
Broilers	535	540
Layers	33	34
	thous. metric tons	
Animal product output		
Beef and veal	60	51
Pork	14	14
Poultry meat	104	131
Eggs[3]	63	66

[1] *Million units.*
[2] *Includes dual-purpose cattle.*
[3] *Million dozen.*

Principal crops—sugarcane, rice, coffee, cocoa, cassava, and plantains—are produced on large farms located primarily in the center of the country and toward the northern and eastern coasts. Other food items, specifically vegetables and beans, are produced throughout the country.

Commercial cattle production is concentrated in the higher quality rangelands of the central and eastern regions. Commercial pork and poultry production is found throughout the country, most using modern intensive practices.

Agriculture has diminished in importance in the Dominican economy in recent years because of rapid growth in the free trade zones and in the industrial service sectors. In 1989, agriculture accounted for 18 percent of the gross domestic product and 33 percent of total merchandise exports.

Approximately 11 percent of the population is still directly involved in agricultural cultivation and production. Of the total population, over 7 million people, or 42 percent, still live and work in rural areas.

Although the country produces significant quantities of agricultural products, most are exported to generate hard currency. As a result, the Dominican Republic imports large volumes of basic foodstuffs to satisfy the shortfall in domestic requirements for an expanding population.

Production highlights

A serious drought from June 1989 to September 1990 had a mixed impact on 1990 crop production. Most crops for domestic consumption—specifically beans, plantains, and cassava—succumbed to the dry weather. Rice production, on the other hand, actually increased as a result of greater irrigation.

The dry conditions did not hurt 1990 production of such export commodities as coffee, cocoa, and tobacco, as they kept soil-born funguses and disease to a minimum. However, sugar production declined dramatically as a result of drought, reductions in both acreage and capital resources, and inefficient management.

Dominican Republic at a Glance

Population (1990): 7.2 million
Urban population: 58%
Population growth rate: 2.3%
Per capita annual income (1990): $944
Total land area: 48,734 square kilometers; 23% arable land, 7% permanent crops, 43% meadows and pastures, 13% forest and woodlands, 14% other
Major crops: Sugarcane, rice, coffee, cocoa, cassava, plantains
Livestock sector: Beef, dairy, poultry
Leading agricultural exports: Sugar and byproducts, coffee, cocoa, beef, tobacco
Leading agricultural imports: Corn, wheat, soybeans and products, rice, tallow, nonfat dry milk
Agricultural imports as a share of total imports: 18%
U.S. share of total agricultural imports: 76%
Percent of population in agriculture: 11%
Membership in economic and trade organizations: CBI, GATT, GSP, IBRD, ICO, IDA, IDB, IFAD, IFC, IMF, IOOC, IRC, ISO, Lome IV, OAS, SELA

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Corn	45.3	100
Pinto beans	17.6	100
Rice	13.2	100
Soybean meal	21.8	100
Soybean oil	47.2	46
Soybeans	19.3	70
Tallow	11.5	100
Wheat	31.0	100
All agricultural products[2]	343.0	76

[1] *Values are shown in U.S. dollars at U.S.$1=6.28 Dominican* pesos.
[2] *Includes products not listed.*

In recent years, cereal production has been increasing in response to higher quality inputs and improved management practices. Advances in rice production reflect the use of higher yielding varieties. Increases in the production of corn and sorghum, in turn, are due primarily to expanded planted area.

Farm and food policy

The Dominican Government is publicly committed to programs of self-sufficiency in basic foods, the enhancement of both the quality and volume of export products, and the improvement of national nutrition at affordable prices.

In reality, as a result of limited resources, the Government has targeted specific crop and livestock sectors for credit and extension service assistance. Priority is being given to those sectors with the greatest potential for generating hard currency, including rice; plantains, cassava, and potatoes; coffee, cocoa, and tobacco; fruits, legumes, and vegetables; and livestock.

Attempts by nongovernment organizations to sway small producers to shift production to fruits, winter vegetables, and other nontraditional cash crops for domestic or export markets have had limited success. In the current economic environment, usurious interest rates and controlled market prices discourage many farmers from engaging in the production of crops not on the Government's assistance list. This situation has produced a dependency on imports to offset frequent shortages of basic foods in the local market.

Imports and exports

In 1989, the Dominican Republic was a net agricultural exporter, with sales of $422 million versus imports of $343 million. Primary exports included sugar and sugar byproducts, coffee, cocoa, tobacco, beef, and various fruits and vegetables.

Exports of sugar and sugar byproducts topped $192 million in 1989; however, the revenue picture for 1990 was not expected to be as bright. Prolonged drought, limited resources, and inefficient management probably lowered production by as much as 17 percent.

Coffee and cocoa export sales earned approximately $93 million in 1989 and are estimated to have reached a similar level in 1990. Exports of tobacco have dropped from $78 million in 1988 to just above $60 million estimated for 1990. The estimate includes exports from the free trade zones. The tobacco industry is in the throes of reorganization, which is disrupting the traditional marketing system.

The Dominican Republic's primary imports in 1989 were corn, wheat, soybeans and products, nonfat dry milk, tallow, and such nontraditional products as rice and pinto beans.

In 1990, the demand for corn is estimated to have been between 375,000 tons and 425,000 tons, most of which was imported. In 1989, local production accounted for only 13 percent of total demand.

Imports of rice, vegetable oil, and tallow in 1990 probably remained near 1989 levels. It is estimated that approximately 70 percent of the country's 1990 edible oil consumption was imported. Approximately 60 percent of protein meal consumption during 1990 is estimated to have been manufactured from imported soybean meal. Only soybeans are imported for local processing.

The United States is the Dominican Republic's chief trading partner, supplying approximately 48 percent of total imports. The United States accounted for 36 percent of total Dominican exports in 1989.

Trade policy and prospects

The Dominican Republic must continue to import basic food products to meet domestic demand. Imports and exports are controlled by the Central Bank, through a licensing mechanism, and "nonessential" items have been discouraged by tariff assessments of up to 150 percent on the free on board value. However, recent tariff reforms provide for lowering basic rates on imports to no more than 5 to 35 percent.

Since 1984, the Dominican Republic has qualified for trade benefits from the United States under the Caribbean Basin Initiative (CBI). The CBI seeks to support economic growth and expand private sector opportunities in the Caribbean region through free trade arrangements that allow duty-free access to the U.S. market for most products produced in the region. ■

Ecuador

Profile of agriculture

Ecuador, located on the equator, is a country with enormous natural resources. Both the tropical coastal plain and the cooler, mountainous Sierra region are rich agricultural areas; the eastern Amazon basin produces forest products and some coffee; the Galapagos Islands, 600 miles off the coast of the Ecuadorian mainland, have virtually no agricultural production but are an ecological preserve famous for unique flora and fauna.

Ecuador is a large producer of tropical agricultural products. It is the world's largest exporter of bananas and a leading exporter of pond-raised shrimp. It produces and exports over half the world's high-quality aromatic cocoa beans.

Coffee, cocoa beans, feed corn, and rice are the principal crops in the coastal region; potatoes and soft "choclo" corn are grown in the mountain region. Beef, dairy, and poultry production are the principal livestock enterprises.

Agriculture provides 17 percent of the gross domestic product, employs 35 percent of the labor force, and accounts for over 25 percent of the value of exports.

Production highlights

Estimates for 1991 indicate slight increases in production of most crops for domestic consumption, including wheat, rice, soft corn, African palm oil, and sugarcane. Feed corn and soybeans were hurt by a drought during the planting season, and potatoes in the Sierra region were damaged by frost.

Despite chronic problems facing Ecuador's internal agricultural sector (that sector producing crops for domestic consumption, rather than for export), output for this sector is estimated to have grown by 4.4 percent in 1989, although it then declined 0.7 percent in 1990.

The production of paddy rice, which represents a critical food staple, reportedly increased slightly to 546,000 tons in 1990. However, production of potatoes, another dietary mainstay, particularly in the Andean region, declined by more than a fourth from the 406,000 tons of 1989. Production of other key food crops, such as soft corn, beans, and peas, rose slightly.

Palm oil production was up nearly a tenth in 1990 to 146,000 tons of red palm oil. Despite unusually strong performance in palm production, Ecuador continues to find itself in an oil-deficit situation, possibly due to unauthorized transshipments to neighboring countries.

Production of feed ingredients, particularly hard corn, does not meet domestic demand. The profitability of corn production is declining as prices have failed to keep pace with increasing input costs. Further declines are projected because some farmers are taking land out of corn production and shifting into banana plantations.

Protein meal was also in short supply in 1989, due to smaller fishmeal production. Despite the smaller pro-

Agricultural Production

	1989	*1990*[1]
	thous. metric tons	
Crop production		
Bananas	2,158	2,508
Cassava (yucca)	114	120
Cocoa	83	110
Coffee	123	130
Corn, soft and hard	382	337
Palm oil (crude)	133	146
Potatoes	406	300
Rice (paddy)	543	546
Soybeans	117	97
Sugarcane	2,914	3,600

	1987
	thous. head
Livestock numbers	
Cattle	
Beef	565
Dairy	522
Poultry	55

[1] *Estimated.*

Ecuador at a Glance

Population (1990): 10.5 million
Urban population: 54%
Population growth rate: 2.8%
Per capita income (1990): $1,000
Total land area: 270,694 square kilometers; crop use 10%, pasture 18%, forests 54%
Major crops: Bananas, rice, coffee, cocoa, African palm oil, potatoes, soft and hard corn, soybeans, cassava, sugarcane
Livestock sector: Beef and dairy cattle, poultry meat, eggs, hogs, shrimp
Leading agricultural exports: Bananas, coffee, cocoa, pond-raised shrimp
Leading agricultural imports: Wheat, soybean oil, cotton, tallow and grease, sorghum, flavorings, animal milk replacers, modified milks
Agricultural imports as a share of total imports: 7-9%
U.S. share of total agricultural imports: 87%
Percent of labor force in agriculture: 35%
Membership in economic and trade organizations: ALADI, Andean Pact, ICCO, ICO, ISO, IWC, SELA, UNCTAD

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ thous.[1]	*%*
Selected products		
Cotton	5,470	100
Flavoring	3,748	58
Modified milks	1,827	4
Soybean oil	15,552	100
Tallow	4,953	100
Wheat	74,665	100
Wines	1,348	[2]
All agricultural products[3]	130,302	87

[1] *Values are shown in U.S. dollars at U.S.$1=879 sucres.*
[2] *Less than 0.5%.*
[3] *Includes forest products.*

duction of feed grains and protein meal, Ecuador's livestock sector grew by a little over 2 percent in 1989.

Production of export commodities fared well in 1990. Cocoa bean output was up 26 percent from the previous year and bananas were up 16 percent. However, diseases in cocoa, coffee, and banana plantations pose serious threats for production.

Farm and food policy

The current Government is pursuing an economic policy of stabilization and inflation control. The implications for the agricultural sector are a short-term emphasis on imports to provide enough food for the population and a longer term emphasis on increased production through improved price incentives, expanded agricultural credit, and more efficient marketing.

The Government is attempting to influence prices at each stage of production and distribution in order to offer producers prices high enough to stimulate production while keeping consumer prices low enough to limit inflation.

Imports and exports

Ecuador is a net agricultural exporter, with sales of $1.14 billion (including forestry and fishery products) in 1990, versus imports of $130 million. The country is a major exporter of bananas, shrimp, coffee, and cocoa. The United States provides a market for 58 percent of Ecuador's banana exports, 75 percent of its shrimp exports, 47 percent of its coffee exports, and 65 percent of its cocoa beans and cocoa bean products. In all, over 65 percent of Ecuador's agricultural exports are purchased by the United States.

Ecuador's shrimp industry is a heavy consumer of wheat as an agglutinant to hold mixed feed pellets together under water. Ecuador borrowed 10,000 tons of wheat from Colombia and must buy Canadian wheat to refund it. The Canadians may be trying to make inroads into the wheat market by donating 16,000 tons of wheat.

Ecuador purchased 100 percent of its import needs of cotton from the United States in 1990. As long as the textile industry has continued access to U.S. Government export credit guarantee programs, the United States will be the first-choice cotton supplier.

Ecuador continues to provide a good market for U.S. exports of soybean crude oil. Ecuador imported about 30,000 tons in July-June 1989/90, with larger imports projected for 1991.

Ecuador will remain a bulk commodity market in 1991 and beyond. Wheat, soybean oil, tallow, cotton, and sorghum continue to represent the best market opportunities for the United States.

In 1990, the United States covered virtually all of Ecuador's agricultural import needs with U.S. Government export credit guarantees. The future of U.S. sales will depend to a great extent on its continuing ability to cover Ecuador's needs under this program.

Trade policy and prospects

Ecuador will continue to import basic food products to meet internal demand. The country has embarked on a course of tariff reforms, with the first step completed in mid-1990 and a second step in the first half of 1991. The highlight of recent reforms was the increase in the minimum tariff level from zero to 5 percent. Before that there were no import duties on most agricultural imports, with the exception of high-value products, some of which paid tariffs as high as 120 percent. The recent reform has placed a ceiling of 35 percent on tariffs for high-value products.

These tariff reforms also have eliminated a 5- to 15-percent monetary stabilization surcharge and the 30-percent surcharge on "luxury" products.

Most agricultural imports are subject to restrictive licensing practices; therefore, the effects of tariff reform will depend, to a great extent, on licensing procedures.

The Government is trying to improve agricultural production through enhanced market orientation. Price liberalization for key farm products—such as wheat, corn, barley, and soybeans—is under consideration.

This liberalization would probably be accomplished in the context of a price band system, with a floor to encourage production and a ceiling to protect consumers. Such a system would link domestic prices to the world market prices and might involve a liberalization on imports of basic agricultural products.

Ecuador is a member of the Andean Pact; tariff reductions and trade liberalization with the Andean countries could further influence commerce in agricultural products such as soybean crude oils, hard corn, rice, and sugar. ■

Egypt

Egypt at a Glance

Population (1990): 56 million
Urban population: 45%
Population growth rate: 2.6-2.9%
Per capita income (1990): $600
Total land area: 995,450 square kilometers; 3% arable, 2% permanent crops
Major crops: Wheat, corn, rice, cotton, sugar, citrus, tomatoes, potatoes
Livestock sector: Dairy cattle, buffaloes, sheep, goats, poultry, donkeys
Leading agricultural exports: Cotton, citrus, potatoes
Leading agricultural imports: Wheat, forestry products, vegetable oils, wheat flour, corn, sugar, beef
Agricultural imports as a share of total imports: 45%
U.S. share of total agricultural imports: 24%
Percent of labor force in agriculture: 32%
Membership in economic or trade organizations: ACC, GATT

Profile of agriculture

Agriculture is the largest employer in Egypt and a major contributor to the gross domestic product. About one-third of Egypt's labor force is engaged directly in agriculture, and many others are engaged in trading or processing agricultural commodities.

All but a small part of Egyptian agriculture occurs on some 2.5 million hectares, located mainly in the Delta and along the Nile Valley. With a large number of farmers and limited land, farms are small, averaging about 1 hectare.

The combination of water from the Nile River, fertile soil, and a mild climate makes Egyptian agriculture one of the most productive systems in the world. Almost all crops are irrigated. The use of irrigation, particularly since the construction of the Aswan High Dam, permits the cultivation of several crops a year on the same land. In effect, this doubles the crop area per year. However, recent droughts in the headwaters of the Nile have underscored the importance of careful water management.

The major crops are cotton, rice, and corn in the summer and wheat, berseem clover, and beans in the winter. Sugarcane is grown on about half the cultivable land in Upper Egypt. Citrus and vegetables are important crops in the Delta and reclaimed desert lands.

Agricultural Production

	1989	1990
	mil. metric tons	
Crop production [1]		
Corn	4.5	4.6
Oranges	1.4	1.4
Potatoes	1.6	1.7
Rice (paddy)	2.7	2.8
Sugar	0.9	1.0
Tomatoes	4.0	4.1
Wheat	3.2	4.2
	thous. head	
Livestock numbers		
Dairy cattle	6,544	6,801
Goats	3,028	3,573
Poultry		
Broilers	40,000	40,000
Layers	14,000	15,000
Turkeys	4,500	4,600
Sheep	3,525	3,615
	thous. metric tons	
Animal product output		
Beef and veal	440	454
Butter	2	3
Cheese	300	310
Eggs [2]	3,000	3,500
Milk		
Cow	1,036	1,060
Other	984	990
Mutton, lamb, goat meat	78	81
Poultry meat	250	260

[1] *Crop years vary by commodity.*
[2] *Million eggs.*

Production highlights

Improved production incentives, liberalized marketing regulations, and increased use of high-yield varieties have resulted in significant increases in wheat, rice, and corn production.

Wheat output reached a record 4.2 million metric tons in 1990, an increase of 1 million tons from 1989. Corn production rose to 4.6 million tons, while paddy rice output was estimated at a record 2.8 million tons in 1990.

Cotton is one of the few remaining crops controlled by the Government, and production remains problematic largely because of the lack of adequate incentives. Cotton (lint) production for 1990 was estimated at 300,000 metric tons, only a slight increase from 1989.

Farm and food policy

Although the Government plays a prominent role in agriculture, most farmland is in private hands. The Government regulates the agricultural sector and influences production by means of acreage quotas and procurement prices. Since 1986 steps have been taken to liberalize agriculture, including decontrol of crop production and marketing and decreased subsidization of inputs. Today, only cotton, sugarcane, and rice production are controlled by the Government.

Recent agricultural reforms have focused on establishing a freer market for agricultural inputs and outputs to

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.	*%*
Selected products		
Beef and products	290	5
Corn	208	60
Cotton	60	97
Dairy products	237	0
Feedstuffs	130	41
Forest products	650	5
Poultry	5	0
Sugar	293	0
Tea, coffee, spices	275	0
Tobacco	180	0
Vegetable oils	350	13
Wheat	874	59
Wheat flour	321	38
All agricultural products	4,100	24

increase efficiency. The Government has moved to divest itself of its monopoly on inputs and has established support prices for most crops.

Egypt's farm production policy is influenced by its social policy, particularly its large-scale food-rationing and subsidy program. Over 95 percent of the population participates in the food-rationing system and is eligible to receive quotas of subsidized sugar and vegetable oil.

Rice, tea, and soap are available through the rationing system but are no longer subsidized. Other important commodities, including bread, flour, and meat, are subsidized but not rationed. The Government has taken steps to reduce the subsidy on a number of food items, however.

Imports and exports

The impact of a rapidly increasing population coupled with inefficiencies in both the production and distribution of food has led to an increasing reliance on imports. Consequently, Egypt is a net agricultural importer, with purchases of $4.1 billion in 1989 versus sales of $372 million. The United States supplies about one-quarter of Egypt's agricultural imports.

Because of a significant increase in domestic production, imports of wheat and wheat flour in 1990 were estimated at 7 million metric tons, slightly lower than the 7.4 million metric tons imported in 1989.

Scarce foreign exchange and a severely depressed poultry industry continued to constrain imports of yellow corn during 1990.

Continuing problems with cotton production caused Egypt to become a net importer of cotton for the first time in many years. As a result, cotton is becoming an important U.S. export to the Egyptian market.

Egypt relies heavily on imported vegetable oil. The availability of U.S. Government export assistance programs for sunflowerseed and cottonseed oil has helped to keep U.S. vegetable oils competitive in the Egyptian market. However, lower priced palm stearin has displaced over two-thirds of the U.S. tallow trade with Egypt over the past 2 years.

Although Egypt imports about one-quarter of its beef requirements, the Government stopped issuing import licenses for beef in September 1990 because of an oversupply on the domestic market. Egypt intends to export excess beef, mainly to the Gulf, to draw down supplies. The restriction on opening letters of credit for poultry imports, which was implemented in February 1988, remains in effect.

Demand for forest products continues to grow, and prospects are good for an increasing U.S. share of the market. Limited supplies and rising prices from traditional Scandinavian and East European suppliers are causing importers to seek alternative sources. The first large shipments of U.S. sawn timber have been well received, and importers are placing additional orders.

On the export side, Egypt's net revenues from cotton exports continue to decrease. In 1990, Egypt reversed a longstanding policy and lowered export prices to maintain market share. However, despite the lower prices, 1990 exports are expected to decline.

Exports of fresh oranges increased to 232,000 metric tons in 1989 and were expected to reach 250,000 metric tons in 1990, as a result of reforms that permit increased private participation in the export market. Exports of other agricultural commodities, including onions, potatoes, and rice, were at or above the previous season's level.

Trade policy and prospects

Egypt imports over 60 percent of the food needed to supply its rapidly growing population of 56 million. The most important factor affecting trade policy during 1990 was Egypt's difficult economic situation and a shortage of foreign exchange. A number of items, notably beef, poultry, fruits, and vegetables, are banned to conserve scarce foreign exchange and to protect domestic agricultural production.

The Government is encouraging the gradual participation of the private sector in international agricultural trade. The private sector is now the major importer of many important agricultural commodities, including meat, dairy, and forestry products, and feed grains. In 1990, the private sector was licensed to import wheat and wheat flour on a limited basis for the first time.

However, the Government remains the major importer of most strategic commodities, including wheat and wheat flour, vegetable oils, and cotton.

The Government prefers credit and long-term supply agreements for agricultural trade. ■

El Salvador

E

Profile of agriculture

El Salvador is the smallest Central American country and the only one without a coastline on the Caribbean Sea.

Agriculture contributes 25 percent to the gross domestic product and employs 40 percent of the labor force. Coffee is El Salvador's most important crop; it serves as a major source of Government revenues and is historically responsible for 50 to 70 percent of the country's foreign exchange earnings, depending on world prices. Other primary agricultural products include beans, corn, rice, sorghum, and sugar.

During the past decade, the military conflict in El Salvador has caused sharp declines in the production of most crops because anti-Government guerrillas attack agriculture as a means to sabotage the economy.

Salvadorans depend on basic grains, especially corn and wheat, as staples in their diets. Wheat is not produced in El Salvador but is almost exclusively imported from the United States. White corn is produced throughout the country.

Agricultural Production

	1988/89	*1989/90*
	thous. metric tons	
Crop production[1]		
Coffee[2]	1,492	2,737
Corn	596	589
Cotton	9	6
Rice, milled	37	42
Sorghum	154	150
Sugar	174	213
Tobacco	679	739
	1989	*1990*
	thous. head	
Livestock numbers		
Cattle		
Beef	1,420	1,438
Dairy	288	245

[1] *Production years are July-June for corn, rice, and sorghum; Oct.-Sept. for coffee; Aug.-July for cotton; Nov.-Oct. for sugar; and Jan.-Dec. for tobacco.*
[2] *Thousand 60-kilogram bags.*

Production highlights

Coffee production rebounded strongly to more than 2.7 million bags (60 kilograms each) in 1989/90, nearly double the previous year's crop, which was severely damaged by bad weather.

Corn production experienced a small decrease in 1989/90 but at 590,000 tons was still near a record high. The production of milled rice increased to 42,000 tons, and sorghum production decreased slightly to 150,000 tons.

Sugar production in 1989/90 increased significantly to 213,000 tons. The cotton industry continued its downward slide with production at only 6,000 tons. Domestic demand for cotton is increasingly being met by imports. Likewise, tobacco production in 1989 decreased to less than 700 tons.

El Salvador's production of fruits and vegetables has been increasing. In 1988/89, output included an estimated 86,864 tons of watermelons, 85,209 tons of oranges, 74,545 tons of pineapple, 66,500 tons of bananas, 34,250 tons of melons, and 25,900 tons of tomatoes.

Red meat production increased slightly during 1990, but tallow production remained unchanged at 2,000 tons. Livestock and dairy production continue to be hurt by El Salvador's civil war and by a shortage of local feed (cottonseed meal) caused by the decline in the local cotton sector.

The Government estimated the national beef herd at almost 1.2 million head in 1990. The poultry industry produces approximately 650 million eggs, 65 million pounds of chicken, and 9 million pounds of hens annually.

El Salvador at a Glance

Population (1990): 5.3 million
Urban population: 43%
Population growth rate: 2%
Per capita income (1990): $913
Total land area: 20,720 square kilometers; 27% arable, 8% permanent crops, 29% meadows and pastures, 6% forest and woodland
Major crops: Beans, coffee, corn, sugar, rice, sorghum
Livestock sector: Dairy, livestock, poultry
Leading agricultural exports: Coffee, cotton, shrimp, sugar
Leading agricultural imports: Vegetable oil, wheat, protein meal, corn
Agricultural imports as share of total imports: 11%
U.S. share of total agricultural imports: 76%
Percent of population in agriculture: 40%

Farm and food policy

During the 1980's, the Government focused on agrarian reform; it created cooperatives from 473 farms of more than 500 hectares each and provided extension and financial assistance to the newly created cooperatives.

Currently, the Government is implementing a rigorous structural adjustment program. Price controls have been eliminated on 226 (mostly agricultural) products, tariffs compressed to a range of 5 to 35 percent, and the tax system reformed.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Corn	13.1	50
Powdered milk	16.4	0
Protein meal	16.7	62
Tallow	15.0	100
Vegetable oil	13.1	99
Wheat	17.2	100
All agricultural products[2]	119.8	76

[1] *Values are shown in U.S. dollars at U.S.$1=5 colones. Includes commercial and concessional imports.*
[2] *Includes products not listed.*

Export taxes for shrimp, sugar, and coffee have been reduced, and special tax schemes that benefited the poultry, livestock, and fishing industries have been eliminated. Government marketing monopolies for sugar and coffee have been dismantled, and the local currency has been devalued significantly in an effort to set a more realistic exchange rate and stimulate exports.

To encourage basic grain production, the Salvadoran Government has removed internal price controls on corn and adopted a price band mechanism whereby import tariffs for corn are adjusted up or down depending on its domestic price. A similar mechanism is planned for rice and sorghum.

Imports and exports

El Salvador is a net exporter of agricultural products, with sales totaling $274 million in 1989 versus imports of $120 million.

El Salvador's biggest imports are corn, oilmeals, vegetable oils, wheat, tallow, and rice.

Despite a good harvest, a record 105,000 tons of corn and a near-record 163,000 tons of wheat were imported in 1989/90. Imports of oilmeals and vegetable oils ran at about 60,000 and 28,000 tons, respectively.

Modest levels of local fruit and vegetable production were supplemented by imports (119,000 and 79,000 tons, respectively) in 1989. Most of these imports were from neighboring Guatemala.

The United States continues to be El Salvador's single most important trading partner. Fueled by high levels of U.S. economic assistance, El Salvador imported $91 million worth of agricultural products from the United States in 1989, chiefly grains, animal fats, protein meal, and vegetable oils.

El Salvador received $65.1 million in export assistance under U.S. Government programs in 1989.

In turn, during 1989, El Salvador exported $126 million worth of farm products to the United States, mainly coffee, shrimp, and sugar.

El Salvador's agricultural export values deteriorated sharply in 1989. Coffee is the most important crop, and exports in 1989 fell almost 36 percent to $230 million. Earnings from sugar, another important export crop, were also off sharply. Exports of red meat to the United States totaled 1,214 tons in 1989, an increase of 15 percent. Poultry exports were minimal at only $500,000.

El Salvador is beginning to exploit its potential as an exporter of nontraditional products such as shrimp and fish. Exports totaled $244.7 million in 1989.

Trade policy and prospects

El Salvador recently became a member of the General Agreement on Tariffs and Trade (GATT), subject to ratification by its National Assembly. Ratification was expected not later than June 30, 1991. The Government continues to license all imports but no longer bans imports of luxury goods. Government agencies responsible for marketing and exporting coffee and sugar have had their powers removed.

El Salvador welcomes foreign investment with significant incentives and tax credits for investors. For example, current law allows foreign investment in all but small-scale enterprises and guarantees full repatriation of profits for most ventures. The United States, with about $100 million, is the country's largest foreign investor.

Some of the most promising investment opportunities in El Salvador include processing and production of vegetables, fruits, and shrimp. ■

European Community

E

Profile of agriculture

Formed in 1957 by the Treaty of Rome, the European Community (EC) grew in size and complexity from the original, somewhat homogeneous 6 member countries to the current 12 (Belgium, Denmark, France, Germany—including the former German Democratic Republic—Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom). Expansion has meant greater agricultural diversity in terms of products grown, farm structures, and other factors.

The EC's Common Agricultural Policy was the first and, until recently, the only unified policy applied in all member states. The mechanisms of the Common Agricultural Policy—which include high support prices, import protection, and export restitutions (subsidies)—are proposed annually by the EC and decided by member countries' agricultural ministers.

The EC has a population 40 percent larger than that of the United States, one-third the amount of agricultural land, and three times the number of farms. At 41 acres, the average EC farm is about one-tenth the size of its U.S. counterpart. Contrary to its status as a net importer in earlier years, the EC became a major producer and net exporter of many agricultural commodities during the 1980's.

Agricultural Production

	1988	*1989*
	mil. metric tons	
Crop production		
Grains	163.5	161.6
Sugar beets	97.4	100.0
Oilseeds	11.5	10.8
	mil. head	
Livestock numbers		
Cattle		
Beef	79.5	78.3
Dairy	24.7	24.0
Hogs	103.9	101.6
Poultry (layers)[1]	303.2	N/A
Sheep	90.9	96.1

[1]*Does not include Spain and Portugal.*

Production highlights

Despite the lack of land and the many small farms, security provided by high support prices and protection from lower priced imports has stimulated intensive use of both fertilizer and high-yielding varieties, thus enabling the EC to strongly increase production.

From the viewpoint of quantity, this approach has been successful, but it has led to difficulties in disposing of surpluses, great financial cost, and significant environmental damage. Consistent use of export restitutions to reduce internal oversupply and to meet export goals has led to conflicts with many of the EC's trading partners.

Partly because of the use of high-yielding, low-quality varieties, wheat production has skyrocketed, exceeding EC consumption in the early 1970's and now running over 20 percent above domestic needs.

In response to similarly attractive support prices, barley and durum crops have also risen strongly, with durum producers also benefiting from a special per hectare premium. In contrast to previously small output, corn is now produced extensively in Italy, Spain, and Greece, although irrigation is necessary.

Sugar beet producers also receive a guaranteed price, although this is the first sector in which it is limited to specific production (quota) levels. Community sugar supplies exceed consumption, but, unlike other product sectors, they are exported without refunds.

European Community at a Glance

Population (1990): 343.6 million, including former German Democratic Republic
Population growth rate: 0.3%
Per capita gross domestic product (1989): $14,842
Total land area: 2,331,356 square kilometers
Major crops: Grains, oilseeds, sugar beets
Livestock sector: Dairy and beef cattle, pork, poultry
Leading agricultural exports: Grains, dairy products, beverages, processed foods
Leading agricultural imports: Soybeans and products, corn and other feed ingredients, tobacco, forest products, fruit and vegetables, cotton, coffee, cocoa
Agricultural imports as a share of total imports: 14%
U.S. share of total agricultural imports: 13%
Percent of labor force in agriculture: 8%

The quota approach was extended to the milk sector in 1984; production was soaring beyond control and still remains high. Although milk quotas have proved cumbersome to administer, they have succeeded in at least stabilizing output.

The EC was a major net importer of proteins, including soybeans, soybean products, and nongrain feed ingredients. However, particularly

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ bil.[1]	*%*
Selected products		
Animal feed	5.4	26
Coffee, cocoa, spices	6.9	0
Fruit and vegetables	9.8	9
Meat	3.0	7
Oilseeds	3.9	48
Timber	8.6	9
Wool	2.9	1
All agricultural products[2]	63.7	13

[1] *Values are in U.S. dollars at U.S.$1=0.908 European Currency Units.*
[2] *Includes products not listed.*

attractive support prices led to a drastic rise in both the production of rapeseed and soybeans.

Beef supplies have also risen, despite efforts to deflate production incentives over the past several years.

Farm and food policy

The original focus of the EC's farm policy was to secure an adequate food supply and to support farm income on a scale comparable to urban areas, thereby keeping small farmers on the land. With drastic increases in both production and the corresponding expenditure for high guaranteed prices and export refunds, the EC began reforming its Common Agricultural Policy in the early 1980's in an effort to reduce production.

These reforms were widely unpopular, complex to administer, and only marginally successful in cutting output. In addition, countries that had become exporters on the basis of EC-financed refunds did not want to see a trade balance erosion resulting from major cutbacks in production incentives and export refunds.

By February 1991, EC farm policymakers faced increasingly strong budgetary pressures, large structural surpluses, and growing environmental problems, which led them to draft several reform proposals. These would mean a shift away from artificially high guaranteed prices toward more direct income assistance through deficiency, set-aside, and other payments.

This proposed redirection of EC farm policy is strongly opposed by the relatively large, efficient farmers whose prices would initially decline, but also by small farmers who generally oppose direct income assistance.

Imports and exports

As a trading block, the EC is the world's largest agricultural importer ($64.6 billion in 1988) and the second largest exporter ($36 billion). The EC's strong export position has developed from vigorous response to production incentives, accompanied by the use of export refunds (subsidies).

Imports, an increasing proportion of which are value-added processed foods, are on the rise as a result of improved incomes. Development of the livestock sector has also stimulated demand for imported feedstuffs.

Major import items for the EC are soybeans and soybean products, corn, raw tobacco, cotton, fruits and vegetables, coffee, cocoa, and forest products. The EC purchased $9 billion in farm products from the United States—primarily soybeans and soybean products, feed ingredients, cotton, tobacco, forest products, and dried fruits and nuts.

Having developed structural surpluses in many important commodity areas, the EC primarily exports wheat, barley, wine, dairy products, beef, pork, and live plants. In 1989/90, EC wheat exports accounted for about 20 percent of total world trade in wheat, compared with about 7 percent in the early 1970's.

The United States is an important EC market, purchasing $5.3 billion worth of olive oil, dairy products, pork, wine, and beer.

Trade policy and prospects

The EC's use of import levies (taxes) has drastically reduced access into the EC market for many countries' products, including those of the United States. Nevertheless, the EC is still trying to close off imports of proteins, the single largest U.S. export to the EC. Other trade-linked policy obstacles include the EC's ban of the use of hormones in meat production.

The EC plans to remove internal market barriers to the movement of goods, services, labor, and capital by January 1, 1993. (This plan is referred to as the EC's 1992 exercise.) Agriculture will be less widely affected by this step than some sectors, as agriculture was already covered by a common EC-wide policy.

However, there will be an impact on agricultural trade and U.S. agricultural interests in areas such as animal and plant health, food packaging and labeling, and others. To ensure continued access to the EC market for its agricultural products, the United States is conducting a bilateral dialogue with the EC on a variety of technical issues. ■

Finland

F

Finland at a Glance

Population (1990): 5.0 million
Urban population: 62%
Population growth rate: 0.5%
Per capita income (1990): $20,660
Total land area: 305,470 square kilometers; 8% crop use, 66% forests
Major crops: Barley, oats, sugar beets, potatoes
Livestock sector: Dairy cattle, poultry, hogs
Leading agricultural exports: Furskins, cheese, butter, oats, dry whole milk
Leading agricultural imports: Coffee, bananas, apples, fishmeal, tobacco, soybeans
Agricultural imports as a share of total imports: 9%
U.S. share of total agricultural imports: 7%
Percent of labor force in agriculture: 8%
Membership in economic or trade organizations: EFTA, GATT, OECD

Profile of agriculture

Finland's agriculture generally accounts for 4 to 5 percent of its gross domestic product and employs 10 percent of its labor force. Agriculture's contribution to the economy increased markedly in 1989 and 1990 because of large grain production. However, the increase did not affect the economy much, as half of Finnish farmers receive incomes from outside sources.

Finnish agriculture is based on small family-owned farms that average 12 hectares of arable land and 35 hectares of forest. Agricultural policy does not favor large farms, and there are restrictions against increasing cultivated land and numbers of livestock.

Farms are highly specialized; about half are devoted to dairy or grain production, about 8 percent specialize in pigs, and 14 percent specialize in poultry. Dairy farms predominate in the east and north, while grain production is concentrated on larger units in the south and west.

The major portion of gross agricultural returns comes from milk, followed by beef and pork. These three items together account for about 75 percent of gross farm returns. Grain and other plant products account for about 18 percent of returns, and poultry and eggs, 7 percent. Forestry is also an important component of Finnish farming.

The excess production of the early 1980's has been brought down since 1986. There are still costly surpluses of milk, eggs, and (in sharply decreasing amounts) beef and pork, which have resulted in burdensome export subsidies and the need for mandatory supply controls.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Barley	1,630	1,720
Oats	1,444	1,662
Potatoes	981	881
Rapeseed	125	117
Sugar beets	1,057	1,125
Wheat	507	627
	thous. head	
Livestock numbers[1]		
Cattle		
Beef cows	9	11
Dairy cows	507	497
Heifers, bulls	350	376
Calves	490	482
Hogs	1,291	1,298
Poultry	6,338	6,430
Sheep	108	107
	thous. metric tons	
Animal product output		
Beef and veal	107	113
Butter	63	64
Cheese	78	80
Eggs[2]	107	105
Milk	2,729	2,775
Pork	173	183
Poultry meat	31	33

[1] *As of June 1.*
[2] *Million dozen.*

Production highlights

Finland is self-sufficient in dairy products, eggs, and meat, and, in good harvest years, grains.

In 1990, for the second year in a row, grain production was much above average. Yields were up considerably due to unusually favorable weather. At 4.3 million tons, an all-time record high, there was an estimated 780,000-ton exportable surplus, of which 540,000 tons were oats.

A set-aside program for grain production attracted 175,000 hectares in 1990. The goal is to reach 350,000 hectares in 1991. It is believed that this goal will be accomplished because nonparticipation in the program will result in an "export cost" fine of $275 per hectare for 15 percent of each farm's grain land not set aside. In addition, the record yields in 1990 are not likely to be repeated, and production thus is expected to be more normal in 1991.

Milk production increased about 2 percent in 1990 to 2.8 million tons because of the exceptional quality of feed grains and hay. A Government program to compensate farmers for giving up dairying is expected to reduce milk production by 300,000 tons in 1991.

Both beef and pork production increased 6 percent in 1990, to 113,000

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Apples	38	21
Forest products	815	2
Oranges	27	[2]
Pears	9	22
Rice	11	27
Soybeans	44	55
Tobacco	41	66
All agricultural products[3]	2,135	7

[1] *Values are shown in U.S. dollars at U.S.$1=4.30 finnmarks.*
[2] *Less than 0.5 percent.*
[3] *Includes products not listed.*

and 183,000 tons, respectively, because of good-quality feed, which resulted in increased average carcass weights. The exportable surplus in 1990 was estimated at 8,000 tons of beef and 21,000 tons of pork.

The poultry market was in good balance, requiring neither exports nor imports. The exportable surplus of eggs, estimated at 28 million dozen in 1990, is expected to be reduced to about half that level in 1991.

Farm and food policy

The basic goals of Finnish agricultural policy are to develop farm income while holding consumer prices at a reasonable level, thus ensuring self-sufficiency in basic foodstuffs, developing the structure of agriculture, and maintaining the rural population.

Since World War II, Finland's agricultural policy has succeeded in transforming agriculture into a more productive sector and reducing the country's dependence on imports. However, the support system has resulted in relatively high food prices and export subsidies, the latter paid largely by the Government.

Agricultural prices are regulated. Prices are set twice a year, following discussions among farmers, their organizations, and the Government.

Spring negotiations take into account cost increases from the previous fall's settlement, the development of farm income measured as the difference between target prices and actual prices received, and the development of income for other groups in society. The fall settlements are much more limited; incomes are not negotiated and capital costs are not taken into account.

The current 5-year Farm Income Act remains in effect until the end of 1994. The major change from the previous act is that producers' responsibility to finance agricultural export subsidies has been considerably increased.

Supply controls have dominated agricultural policy, resulting in reductions in surpluses.

In 1985, the Finnish Government instituted a dual-price system for milk, which is the major reason for the decrease in the numbers of dairy cows from 628,000 in 1985 to 497,000 in 1990.

The system established production ceilings on milk deliveries for each farm. It set quotas for all producers normally delivering more than 30,000 liters of milk a year. Deliveries above quota are penalized by a price reduction. Quotas have also been established for individual dairy plants.

Imports and exports

Finland is a net agricultural importer, with purchases of $2.1 billion in 1989 versus exports of $713 million.

The largest agricultural import by value was coffee, valued at $180 million in 1989. Fruits, vegetables, and soybeans were other big import items.

Agricultural imports from the United States in 1989 totaled $142 million, up $26 million from 1988. Soybeans, raw tobacco, wood products, and wheat were the leading items, but a significant amount of fruit was also imported from the United States.

Finland exported $713 million in food and agricultural items in 1989. About 12 percent—mainly oats, cheese, chocolate candy, and pork—went to the United States.

The largest agricultural export item in 1989 (aside from forest products) was unprepared hides and skins, valued at $231 million. Of these, the United States imported $19 million worth.

As a result of the exceptionally good grain crop in 1989, exports of grain and grain products increased to $69 million, compared with $21 million in 1988. Exports of dairy products, at $131 million, remained at about the 1988 level.

Trade policy and prospects

Finland is a member of the European Free Trade Association (EFTA), a group of European countries that has eliminated tariffs on manufactured goods traded among member countries.

Finland uses extensive and expensive agricultural subsidies to finance the export of surplus production. It also uses trade regulations, mainly import licensing, to protect its agriculture from competitive imports. ■

France

F

Profile of agriculture

A favorable climate, relatively large tracts of fertile land, and the application of modern technology have combined to make France the leading agricultural producer in Western Europe and a major competitor of the United States. France produces a wide variety of products, including wine, grains, meat, and dairy products.

A member of the European Community (EC), France accounts for about one-fourth of total EC farm production and nearly one-third of all agricultural land within the Community. France has become self-sufficient or an exporter of most agricultural products, except feed proteins and tropical and horticultural products.

French agriculture has developed rapidly in recent years because of the high prices of the EC's Common Agricultural Policy and French national policies to promote farm investment. The agricultural population has been greatly reduced, and the size of the average farm has increased.

Twenty-two percent of French farms exceed 40 hectares, and these account for about two-thirds of farm sales. However, more than half of French farms are smaller than 20 hectares, and these produce only 14 percent of the national farm output.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Fruits		
Apples	1,818	1,885
Peaches and nectarines	546	505
Pears	327	318
Grains	57,300	55,500
Barley	9,840	10,100
Corn	13,400	9,800
Wheat	31,850	33,600
Oilseeds and feed pulses		
Pulses for feed	2,947	3,728
Rapeseed	1,765	1,900
Sunflower	2,118	2,250
Sugar beets	24,596	26,790
Wine grapes[1]	60,818	64,000
	thous. head	
Livestock numbers		
Cattle, total	20,120	19,980
Beef	3,140	3,150
Dairy	5,570	5,480
Hogs, total	11,866	11,860
Sheep, total	11,500	11,500
	thous. metric tons	
Animal product output		
Beef and veal	1,670	1,710
Butter	518	520
Cheese	1,485	1,530
Dry milk	714	740
Eggs[2]	15,050	14,600
Lamb and goat	160	150
Milk	26,500	26,800
Pork	1,840	1,870
Poultry	1,550	1,604

[1] *Thousand hectoliters.*
[2] *Million eggs.*

Production highlights

According to most economic indicators, 1990 was an excellent year for French agriculture despite problems in the livestock sector. The value of agricultural products sold from French farms increased 2 percent to $60 billion as both quantity and prices increased. Average real agricultural revenue per farm increased 5 percent in 1990, following an increase of 8.5 percent in 1989.

The value of wine production was up nearly 17 percent to $9.8 billion in 1990, as prices increased sharply—especially for high-quality wines. In 1990, for the first time, French wine production in 1990 surpassed the value of farm sales of grain ($9.7 billion), milk ($9.4 billion), and beef and veal ($8.4 billion) to become the most important French agricultural sector.

France at a Glance

Population (1990): 56.3 million
Urban population: 75%
Population growth rate: 0.35%
Per capita income (1989): $17,208
Total land area: 545,630 square kilometers; 32% crop use, 21% permanent pastures, 2% vineyards and orchards, 27% forests
Major crops: Wine grapes, wheat, sugarbeets, corn, barley, feed peas, apples, sunflower, rapeseed
Livestock sector: Dairy cattle, beef cattle, hogs, poultry
Leading agricultural exports: Wine and beverages, grains, dairy products, beef, poultry meat, sugar
Leading agricultural imports: Meat and offals, fresh and dried fruits, protein meals and other feeds
Agricultural imports as a share of total imports: 12%
U.S. share of total agricultural imports: 4%
Percent of population in agriculture: 6%
Membership in economic or trade organizations: EC, GATT, OECD

Other important sectors were hogs ($3.6 billion), fresh vegetables ($3.3 billion), poultry meat ($3.1 billion), and fruit ($2.9 billion).

French grain output in 1990 was down 3 percent to 55.5 million tons because of a summer drought that lowered corn production. Despite the problems with corn, however, the 1990 wheat harvest was a record 33.6 million tons.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beverages	1,051	1
Dairy and eggs	1,082	0
Fruits, fresh and dried	2,003	6
Fruits and vegetables, processed	1,074	3
Grains	349	31
Meat and offals	3,187	3
Oilseeds and seeds	369	22
Protein meals and other feeds	1,390	10
Wood and products	1,672	5
Vegetables, fresh and dried	1,195	1
All agricultural products[2]	21,809	4

[1] *Values are shown in U.S. dollars at U.S.$1=6.38 francs.*
[2] *Includes products not listed.*

The livestock sector had a difficult year. Meat production increased in 1990 at the same time that imports increased and consumption fell. Consequently, prices received by farmers fell roughly 6 percent for all livestock and 10 percent for sheep. French broiler and turkey production increased strongly, but prices declined. France and the United States are by far the largest poultry exporters in the world.

Total fruit production declined 1 percent in 1990, but prices received by farmers increased 22 percent because of lower supply and increased consumption. The value of fruit production was up nearly 21 percent in 1990.

Farm and food policy

French agricultural policy focuses on protecting farm incomes and expanding production and exports. The EC's Common Agricultural Policy has maintained farm incomes and stimulated production, but at the cost of high consumer prices and increasing budget expenses. Because of its natural comparative advantage in the production of many agricultural commodities, France resists the general imposition of production controls.

The French Government also directly assists farm incomes through tax concessions, subsidized credit, and social security programs. National expenditures for agriculture are among the highest in the EC.

Imports and exports

France is a net exporter of agricultural goods, with sales at a record-high $29.7 billion in 1989, versus imports of $22.1 billion.

Agricultural products accounted for about 17 percent of the total value of French exports in 1989. Beverages (largely wines), bulk grains, and dairy products make up over 50 percent of the total value of agricultural exports. Roughly two-thirds of French agricultural exports are shipped to other EC countries.

In 1989, agricultural products accounted for 12 percent of total French imports, with approximately 60 percent originating in other EC countries. The major agricultural imports in value terms are meat and offals and fresh fruits and vegetables.

Despite its positive agricultural trade balance in 1989, France continued to experience a trade deficit in grocery goods, canned and packaged products, fruit juices, and bakery products.

The largest non-EC market for French agricultural exports is the United States, which accounts for about 4 percent of total French farm sales. Wine and champagne account for over 75 percent of the value of French agricultural exports to the United States.

About 4 percent of French agricultural imports come from the United States. Nongrain feed ingredients, fruit, bulk grains, and meat and offals accounted for 57 percent of the value of these imports in 1989.

Trade policy and prospects

Sales of many agricultural products to France are prevented by the complex EC system of tariffs, levies, quotas, and phytosanitary regulations. The French consider the EC's export subsidies essential to maintaining the French agricultural trade surplus and therefore essential in partially offsetting the trade deficit in industrial products.

Given the many barriers that protect France from agricultural imports, the best French import prospects are high-value and niche consumer products that can survive or avoid the barriers. French eating habits are shifting toward American-style convenience foods and snack foods because of rising incomes, more working women, and more numerous but smaller families. The trend is thus favorable for U.S. exporters with manufacturing expertise in certain processed products. ■

Germany

G

Profile of agriculture

The Federal Republic of Germany (West Germany) and the German Democratic Republic (East Germany) were reunited in 1990, ending 45 years of political, economic, and social division following World War II. The impact of reunification is still being felt by the country's agricultural sector.

In the west, agriculture accounts for only 2 percent of the gross national product. Only 8 percent of the agricultural labor force is hired, full-time labor, and less than 50 percent of all farms in the west are classified as full-time farms. Dairy and beef farms account for 60 percent of the land area devoted to full-time farming.

In eastern Germany, the countryside remains collective. Fewer than 3,000 farmers have taken the opportunity to re-form their family farms. Private plots, which used to contribute at least marginally to agricultural production, have been all but abandoned. Private farming contributes only about 5 percent of agricultural production.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Grains	36,993	37,713
Potatoes	16,647	14,933
Sugar beets	26,987	31,478
	thous. head	
Livestock numbers		
Cattle	20,383	19,490
Dairy cows	7,074	6,505
Hogs	34,602	30,907
Laying hens	69,266	61,000
	thous. metric tons	
Animal product output		
Beef and veal	1,945	2,160
Milk	32,293	31,966
Pork	4,016	4,187

Production highlights

Grain production, particularly wheat, continues to be a secure and profitable crop for farmers in the west. Grain area for the 1989 harvest expanded by nearly 2 percent after several years of reduction. Feed use of grains in 1988/89 rose to 15.3 million tons, up from 14.8 million tons the year before. The increase was generally attributed to reduced prices.

Area planted to all grains in the west dropped to 4.52 million hectares, continuing the downward trend from the record 5.33 million hectares in 1978. Farmers have been converting grain area primarily to oilseeds (mainly rapeseed) and, to a lesser degree, to pulses. Rapeseed production in 1989 was 19 percent above 1988.

In the east, the grain harvest in 1990 was one of the best ever. At 11.8 million metric tons, it was up nearly 10 percent from 1989, because of better inputs (farmers could buy western herbicides and pesticides as early as April), better cultivation and harvesting techniques, and good weather.

This record harvest was not a blessing, however. Its size contributed to price instability for grains in the latter half of the year, when demand for grain in the five new German states was halved as farmers turned to better mixed feeds, including protein meals and minerals, and less grain for their animals.

The change to a market economy has caused a sharp reduction in livestock numbers in the east. During 1990, cattle numbers fell by 8 percent and cow numbers by 12 percent. The drop in pig numbers was even more dramatic, down 20 percent, with sow numbers reduced by a third. Because of restructuring in the slaughtering industry, most of these animals are slaughtered in western German plants and the meat exported. The number of laying hens also was reduced by 30 percent.

The fruit and vegetable sector in the five new states also experienced dislocations. Many crops were fed to animals or went unharvested, because the domestic market would not absorb the low-quality products. In the five new states, the horticultural sector will survive with more specialized, technically advanced production units.

Germany at a Glance

Population (1989): 78.7 million
Population growth rate: 1.2% in the west; minus 1.5% in the east because of emigration during 1989
Per capita gross national product (1989): $19,317 (west), $9,679 (east)
Major crops: Wheat, barley, rapeseed, sugar beets, potatoes
Livestock sector: Cattle, hogs, poultry
Leading agricultural exports: Meats and dairy products, processed fruits and vegetables, high-value foods, oilseed products, feed and feed grains, beer, wine, spirits
Leading agricultural imports: Fruits, vegetables, juices, meats and dairy products, oilseeds and oilseed products, coffee, wines and spirits, feed grains, nongrain feeds
Membership in economic or trade organizations: ADB, CCC, Council of Europe, DAC, EC, EIB, EMS, GATT, IBRD, ICAC, ICO, IDA, IDB, IFAD, IFC, OAS (observer), OECD, WSG

Value of Agricultural Imports, 1989[1]

	Total imports	*U.S. share*
	$ mil.[2]	*%*
Selected products		
Cheese and milk products	2,213	[3]
Citrus, tropical fruits, nuts	1,399	11
Coffee	1,889	[3]
Cotton	420	17
Feed grains	487	3
Fruits and vegetables[4]	5,757	1
Meat and products	3,590	3
Nongrain feeds	715	26
Oilseeds and products	2,988	18
Rice	132	30
Seeds	103	7
Tobacco and products	709	30
Wheat	460	3
Wines and spirits	1,574	1
All agricultural products[5]	31,788	1,460

[1] *Data are only for the Federal Republic of Germany (West).*
[2] *Values are shown in U.S. dollars at U.S.$1=1.88 marks.*
[3] *Zero or less than 1 percent.*
[4] *Includes fresh and processed products and juices.*
[5] *Includes products not listed.*

Farm and food policy

As an original member of the European Community (EC), Germany's national agricultural policy is largely aligned with EC policy and subsidy rules.

A substantial increase in domestic budget appropriations for agriculture in recent years reflects the strengthening of national support, designed to offset farm income declines caused by EC pricing policy.

The Government also wants to conserve the countryside and maintain the family farm structure. It promotes EC programs designed to limit overproduction, including land set-aside. In addition, farmers over age 56 may apply for early retirement support, provided they take their land out of production or make it available to other farmers.

The five new states have been fully integrated into the larger German market, but major structural problems remain in agriculture:

- The question of land ownership must be settled. Claims to land are still being reviewed at the local, district, and Federal levels. Uncertain land tenure affects the reorganization of the collective farms, the restoration of family farms, and access to credit for all farm units.
- The agricultural work force is too large. Collective farm membership rosters, which indicate the size of the work force, have not been trimmed. Of an estimated 800,000 agricultural workers at the end of 1989, about 600,000 workers remained in the agricultural sector, which was about 200,000 more than the work force size recommended by western German analysts.
- Cropping patterns in the east are being adjusted to the reality of the Common Agricultural Policy, potentially increasing the grain surpluses of the EC. In the same way, the livestock sector is responding to policy signals, as the reduction in dairy cow numbers is required by the restrictive milk quota allocated to the five new eastern states.

Imports and exports

Germany has long been one of the largest importers of food and agricultural products in the world, buying just under $32 billion worth in 1989.

Agricultural imports include meat, fruits, vegetables, tropical products, oilseeds and oilseed products, and high-value food products.

Although imports vastly exceed exports, Germany is the world's fourth largest agricultural exporter, thanks to EC production and export incentives and to the country's processing capability.

Major exports include meats and meat products, wheat and feed grains, rapeseed oil and meal, processed fruits and vegetables, hops, beer, wine, and sweets. EC member states are the best customers: in 1989, nearly 70 percent of West German agricultural exports were to EC countries.

Trade policy and prospects

Germany's food and agricultural trade policy is influenced by its membership in the EC. EC preference and protective import duties make it difficult for non-EC countries to compete in many individual food and agricultural product markets in Germany.

In some instances, German food laws are stricter than those of the EC. In fact, the country has one of the most restrictive sets of food laws in the world. ■

Ghana

G

Profile of agriculture

Ghana is only a few degrees north of the equator on West Africa's Gulf of Guinea. The climate is tropical and the country is mainly agricultural, consisting of many subsistence farms. Slightly more than half of the labor force is engaged in agriculture, and this sector accounts for about half of the gross national product.

Ghana's main food crops are, in order of importance, cassava, yams, plantains, cocoyams, corn, sorghum, millet, and rice. The main cash crops are cocoa and cocoa products (which provide about two-thirds of export revenues) and forestry products.

The livestock industry is not large. The average Ghanaian consumes 2,000 calories daily, including 44 grams of protein, of which 70 percent comes from plants rather than animals.

Production highlights

Stimulated by good weather and better Government pricing policies, Ghana's agricultural sector has been growing. There has been an impressive rebound in cocoa production, which in 1989 approached the Government's long-term target of 300,000 metric tons. However, erratic rainfall in 1990 probably curtailed 1990/91 production.

Excess supplies of cocoa on the world market led to lower prices and disappointing returns, but the Government was able to increase producer prices moderately and thus eliminate the temptation to smuggle cocoa through neighboring Côte d'Ivoire, where the farm gate price for it has fallen below that of Ghana.

Root crops, such as cassava and yams, account for about 44 percent of the value of the gross agricultural product. Plantains account for another 7 percent.

Cereal production contributes 7 percent, although occasional surpluses have caused marketing difficulties as grain farmers have increased output.

After a virtual collapse of the economy, economic reforms and favorable weather since 1983 have contributed to a sharp increase in grain production. Following very good cereal harvests in 1988 and 1989, Ghana had a surplus of corn and exported 17,000 metric tons in early 1990. By mid-1990, however, crop prospects fell as a result of late rains, and the price of corn rose sharply.

Government planners are increasingly focusing on creating an orderly marketing system, now that production is capable of matching consumer demand.

Rice demand has increased in tandem with urbanization. Local production must be supplemented by substantial imports, and consumer preference for the higher quality imported rice has led to marketing difficulties for local rice, particularly in the dry northern areas, where locally produced rice tends to break in milling. Rice production fell sharply in 1989 as a result of flooding, dropping from 95,000 metric tons (milled basis) in 1988 to 67,000 tons in 1989. Production declined again in 1990.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Cassava	3,400	2,717
Cocoa	295	250
Corn	714	553
Plantains	2,024	798
Rice	67	50
Sorghum and millet	395	210
Yams	1,224	877
	mil. head	
Livestock numbers		
Cattle	1.3	1.3
Goats	2.2	2.2
Hogs	0.5	0.5
Poultry	8.5	9.0
Sheep	2.3	2.3

Ghana at a Glance

Population (1989): 14 million
Urban population: 30%
Population growth rate: 2.9%
Per capita income (1989): $363
Total land area: 230,020 square kilometers; 7% permanent crops, 15% meadows and pastures, 37% forest and woodland
Major crops: Cocoa, cassava, corn, rice, plantains, yams and cocoyams, forest products
Livestock sector: Poultry, cattle, hogs, sheep, goats
Leading agricultural exports: Cocoa and cocoa products, forest products, nuts, pineapples, peanuts
Leading agricultural imports: Wheat, wheat flour, rice, nonfat dry milk, vegetable oil, sugar, fish
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: 32%
Percent of labor force in agriculture: 66%
Membership in economic and trade organizations: GATT, IBRD, IDA, IFAD, IFC, IMF

Farm and food policy

Ghana has followed a policy of economic reform since 1983, under guidelines recommended by the World Bank and the International Monetary Fund. It devalued its currency to a

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cotton	0.2	100
Dry milk	3.7	5
Rice	30.0	41
Vegetable oil	4.0	12
Wheat and flour	25.5	24
All agricultural products[2]	100	32

[1] *Estimated values are shown in U.S. dollars at U.S.$1=270* cedis.
[2] *Includes products not listed.*

realistic exchange rate, abolished import licensing, and sought to encourage the private sector. The major agricultural objectives are:

- Self-sufficiency in the production of cereals, starch tubers, and animal protein;
- Maintenance of adequate buffer stocks of grains;
- Self-sufficiency in industrial raw materials, such as cotton, palm oil, tobacco, and peanuts;
- Increased output of cocoa and other exportable crops; and
- Improved storage, processing, and distribution systems to minimize post-harvest losses.

Guaranteed minimum producer prices have been increased for cocoa, but attempts to fix minimum prices for corn and rice ceased in 1990. Other key Government policies include improved infrastructure and extension services, reduced subsidies, and a smaller Government presence in direct production efforts, resulting in a movement toward privatization.

The Government is gradually relinquishing some large-scale farming operations, and the Cocoa Board has been attempting to sell a number of its farms.

Imports and exports

In 1990, Ghana's imports ($1.1 billion) exceeded exports ($793 million) by more than $300 million. The trade deficit was financed by grants and long-term concessional loans. Ghana's food imports are a relatively small portion of total imports.

The country imports about 100,000 tons of wheat a year from the commercial market and receives smaller quantities from Canadian and U.S. forcign aid programs. Several new grain storage plants, which have been built or are nearing completion, will enhance the nation's ability to store harvests and to import.

Despite expansion in lint cotton production, Ghana still must import about half its needs. The country also imports most of its dairy products.

Because of low income levels, consumption of vegetable oils is much lower than in several other West African countries. High prices for locally produced palm oil have stimulated local production but restrained consumption. Traditionally, Ghanaians have used unprocessed red palm oil gathered from wild groves.

Virtually all peanuts are used for direct human consumption, rather than industrial crushing for peanut oil. In 1988, the United States supplied nearly 6,000 metric tons of soybean oil under the Food for Peace Program. Ghana also occasionally imports U.S. tallow to make soap when local palm oil supplies are insufficient.

Cocoa and cocoa products provide the bulk of agricultural exports each year. Through 1989, cocoa revenues accounted for over half of total revenues. However, in 1990 this share fell to 39 percent as lower world prices more than offset increased volume.

The forestry industry, which generates 5 percent of the gross national product, also contributes substantial exports. In 1988 a multidonor 5-year program was initiated to plant trees to halt desertification. The value of timber exports grew 36 percent between 1986 and 1988, but growth is expected to slow as a result of environmental policies.

Trade policy and prospects

Despite some disappointments in international markets—such as the low world cocoa price—Ghana is continuing its drive toward trade liberalization and more open markets.

The standard of living is increasing slowly, and the long-term outlook bodes well for continued economic growth, expansion in agricultural production, and a gradual recovery of the economy.

Debt service fell from a high of 68 percent of export earnings in 1888 to 57 percent in 1989, as high-interest loans were replaced by concessional financing. By the early 1990's, debt service is expected to fall below 30 percent of export earnings, giving the country more financial leeway to rebuild the economy and expand trade. ■

Greece

G

Profile of agriculture

Agriculture in Greece accounts for about 17 percent of the gross domestic product and 27 percent of the work force, a larger component of the economy than in most other member countries of the European Community (EC).

Many of Greece's nearly 1 million farms are small and fragmented. About 75 percent are 1 to 5 hectares; less than 1 percent are more than 50 hectares. Severe structural problems include lack of water; prevalence of difficult, hilly or mountainous terrain; and poor, eroded soils. Nevertheless, much of the limited flatland agriculture is modern and productive.

Traditional Mediterranean crops—including olives, fruits and vegetables, and tobacco—account for slightly over 70 percent of the value of agricultural production; cereals, meat, and dairy products for less than 30 percent—the inverse of the situation in northern EC countries.

Agricultural Production

	1989	1990[1]
	thous. metric tons	
Crop production[2]		
Alfalfa	1,522	1,489
Barley	500	480
Corn	1,650	1,350
Cotton	255	230
Oranges	933	819
Sugar beets	198	235
Tobacco	113	119
Tomatoes	2,150	1,800
Wheat	1,984	1,650
	thous. head	
Livestock numbers		
Cattle	723	715
Beef	497	485
Dairy	226	230
Goats	10,500	10,450
Hogs	1,114	820
Poultry[3]	40,686	40,686
Broilers	23,874	23,874
Layers	16,819	16,819
Sheep	10,694	10,400
	thous. metric tons	
Animal product output		
Beef and veal	82	80
Cheese	210	200
Eggs[4]	200	208
Milk	1,838	1,740
Cow	675	640
Other	1,163	1,100
Pork	151	150
Poultry meat	154	153

[1] Estimated.
July-June crop years, except Jan.-Dec., for alfalfa and tobacco, Aug.-July for corn and cotton, and Sept.-Aug. for oranges.
[3] 1988 data.
[4] Million dozen.

Production highlights

The value of agricultural production in current prices fell 6 percent in 1990, reflecting damage from winter and spring drought. Winter wheat, pastures, and summer vegetable crops were hit hardest. Among fall crops, corn production declined sharply because of drought and the continuation of a shift in area from corn to cotton. Most other crops were hurt less by the dry weather, but quality and yields generally were lower.

Livestock production continued to stagnate. Crop and livestock losses to drought are estimated at a little over $1 billion, and Greece has applied to the EC for drought assistance.

Citrus production in 1990 declined 11 percent from the record 1989 harvest. Deciduous fruit output was mixed, but generally higher. The most important deciduous fruit crop, peaches, rose 9 percent to a new record high of 700,000 metric tons.

Production of tomatoes for processing, the most valuable vegetable crop, was down 16 percent.

Greece at a Glance

Population (1990): 10.1 million
Urban population: 64%
Population growth rate (1990): 0.4%
Per capita income (1990): $6,680
Total land area: 132,000 square kilometers; 30% agricultural, 40% pasture, 23% forests, 7% other
Major crops: Fruit, tomatoes for processing, olive oil, wheat, corn, sugar beets, barley, cotton, tobacco
Livestock sector: Sheep, goats, poultry, hogs
Leading agricultural exports: Fresh and processed fruits and nuts, grains, olive oil, cotton, tobacco
Leading agricultural imports: Meat and dairy products, forest products, fish, processed foods, oilseeds
Agricultural imports as a share of total imports: 20%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 27%
Membership in economic or trade organizations: EC, GATT, OECD

The olive crop was badly hurt by the prolonged drought, and olive oil production was expected to be down at least 15 percent.

Because of the high EC-guaranteed support price, cotton area has expanded significantly since Greece joined the EC, but drought reduced lint cotton production 10 percent.

Drought also reduced the important wheat crop by 17 percent, to 1.65 mil-

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cotton	61	12
Dairy products	452	-
Fish	142	6
Forest products	285	10
Grains	86	5
Meat and edible offals	763	1
Misc. processed foods	120	1
Oilseeds	100	49
Sugar and confectionery	91	-
Tobacco	83	3
All agricultural products[2]	3,068	4

[1] *Values are shown in U.S. dollars at U.S.$1=162 drachmas.*
[2] *Includes products not listed.*

lion metric tons, of which roughly three-fifths was durum. Although Greece is nominally self-sufficient in wheat, EC supports have boosted durum at the expense of soft wheat. Durum is now an important export crop.

Production of tobacco, an important export crop, rose slightly. In the past 2 years, production of Virginia flue-cured tobacco increased significantly, output of several oriental varieties declined, and production of burley remained stagnant.

Farm and food policy

Agricultural policy is governed largely by the EC's Common Agricultural Policy. Greece's principal objectives within the EC are to ensure support from other members to preserve and improve the incomes of small traditional farmers.

In 1988, Greece received $1.7 billion in agricultural financial support from the EC (not including $1.55 billion for guaranteed price supports to farmers) and $169 million for structural improvements and aids (including special aids to Mediterranean countries). The structural programs must be partially financed by the recipient member state, a problem for the Greek Government, which is experiencing a serious budget squeeze.

Major agricultural policy goals include restructuring production toward crops with higher demand, improving very low livestock and dairy productivity, improving farming infrastructure, and reorganizing the heavily indebted but all-important farm cooperative sector.

Imports and exports

After Greece became a full member of the EC in 1986 and opened its borders to EC imports, its trade deficit ballooned to $900 million by 1988—a drought year that hurt fruit and vegetable exports. In 1989, with improved weather, the deficit declined to $360 million on agricultural imports of just over $3 billion and exports of $2.7 billion. Because of renewed drought, the deficit is estimated to have risen again in 1990.

About 70 percent of the value of Greece's agricultural import and export trade is with the EC. Almost all the country's agricultural trade deficit is for meat and dairy imports. Although exports rose in 1989, Greece has not succeeded in offsetting growing imports of meat and dairy products. In 1989, these imports totaled $1.2 billion, virtually all from other EC countries.

Greece imported $130 million worth of U.S. agricultural products in 1989, while the United States imported $101 million in products from Greece.

The United States supplied 4 percent of Greek imports, with oilseeds, forest products, and cotton representing 69 percent of the total. The U.S. share of Greek agricultural exports was just under 4 percent, with processed vegetables, fruits, and nuts, and tobacco accounting for 82 percent of the total. Greece's largest exports, on a value basis, were fresh and processed vegetables, fruits, and nuts, at $963 million. Grains, animal and vegetable fats (principally olive oil), and cotton were also major export items, totaling $375 million, $359 million, and $304 million, respectively, in 1989. Except for $2 million worth of olive oil, the U.S. share of these products was almost nil.

Trade policy and prospects

After Greece joined the EC, it gradually eliminated most, although not all, of its longstanding protectionist nontariff trade barriers.

One of the country's primary concerns is to improve production and exports of crops for which it has a comparative advantage and to increase the competitiveness of its food-processing sector, which, along with the troubled meat and dairy industries, is expected to come under greater pressure from imports when the EC's single market becomes a reality after 1992.

Greece, whose position in the Uruguay Round has been moderate, has generally accepted and supported EC agricultural policies.

Given that its agricultural production has not contributed to world surpluses, Greece accepted the concept of reduced price supports and export subsidies, as long as the income of its small farmers would be sustained. Trade policy officials have expressed a willingness to shift away from price to direct income and other supports. ■

Guatemala

G

Profile of agriculture

Guatemala is the most productive and populated Central American country. It has the third largest area, after Honduras and Nicaragua, but its rapid population growth rate is limiting the potential for expanded per capita output.

The agricultural sector is the driving force in the country's economy, contributing 25 percent of the gross national product, providing 70 percent of export earnings, and employing 60 percent of the labor force.

The agricultural sector is characterized by both commercial and subsistence farming. The large commercial operations and their associated agri-industries are located primarily in the north and on the low-lying, fertile, southern coastal plain. The small-scale operations, primarily located in the western highlands, are operated by subsistence producers who grow beans, corn, and vegetables for home consumption.

Agricultural Production

	1988/89	*1989/90*
	mil. metric tons	
Crop production [1]		
Cardamom	0.01	0.01
Coffee [2]	3.02	3.47
Corn	1.27	1.15
Rubber	0.02	0.02
Sesame seed	0.02	0.03
Sugar	0.71	0.88
Wheat	0.05	0.03
	1989	*1990*
	mil. head	
Livestock numbers		
Beef cattle	2.4	2.2
Hogs	1.6	1.7

[1] *Crop years are July-June for corn, rubber, and sesame seed; Sept.-Aug. for cardamom; Oct.-Sept. for coffee; Nov.-Oct. for sugar; and Nov.-Dec. for wheat.*

[2] *Million 60-kilogram bags.*

The production of premium-grade coffee dominates the agricultural economy, but Guatemala also produces a variety of other commodities. It is the world's largest exporter of the spice cardamom; a major producer of bananas; and a developing producer and exporter of shrimp, lobster, seafood, cut flowers, fruits, and vegetables.

Corn and edible beans are grown in every corner of the country and are the staple foods for most Guatemalans, especially the indigenous Indian population. In addition, Guatemala produces cotton, honey, rubber, sesame seed, sugar and molasses, tobacco, and wheat.

Poultry production has experienced a prolonged period of robust growth and has replaced beef as the popular meat choice because of its competitive price and availability.

Production highlights

The 1989/90 crop cycle was mixed. Production of many of the leading export commodities—such as coffee, sugar, and bananas—increased, while the production of basic grains decreased.

Coffee production increased 15 percent to almost 3.5 million bags (60 kilograms) in 1989/90. Growth in sugar production was especially robust; production increased to 875,000 tons, up 24 percent from the previous year, as sugar producers responded to comparatively high prices in both the international and U.S. markets.

The production of bananas rose 3 percent to almost 20 million boxes (40 pounds each), and tobacco production increased by some 30 percent in 1989.

Both beef and poultry meat production increased 7 percent in 1989 to 61,000 and 83,000 tons, respectively. The production of pork remained stable at about 14,000 tons.

Guatemala at a Glance

Population (1990): 9.1 million
Urban population: 41%
Population growth rate: 2.6%
Per capita income (1989): $1,185
Total land area: 108,430 square kilometers; 12% arable
Major crops: Coffee, sugarcane, bananas, corn, beans, cotton, cardamom
Livestock sector: Beef, poultry, pork
Leading agricultural exports: Coffee, sugar, bananas, processed foods, cardamom, cotton, beef
Leading agricultural imports: Prepared foods, wheat, vegetable oils, dairy products, tallow, protein meals
Agricultural imports as a share of total imports: 12%
U.S. share of total agricultural imports: 47%
Percent of labor force in agriculture: 60%
Membership in economic and trade organizations: CACM, CBI, IBRD, ICO, IDB, IMF, OAS, SELA

Food and farm policy

The Government maintains production incentives for essential agricultural commodities such as black beans, corn, wheat, and rice. These and other commodities receive direct Government support through an agricultural marketing agency that establishes minimum producer prices and purchases agricultural commodities for distribution to consumers at low prices. In recent years, however, the

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal feed ingredients[2]	11.0	72.4
Beverages	8.0	13.7
Dairy products and eggs	24.8	6.7
Essential oils	11.4	40.4
Flour and other grain products	8.6	28.8
Grains[3]	8.2	74.1
Prepared foods[4]	37.9	34.6
Tallow	14.2	100.0
Vegetable oils	24.4	38.8
Wheat	26.5	100.0
All agricultural products[5]	212.6	46.7

[1] *Values are shown in U.S. dollars at U.S.$1=2.70* quetzales. *Includes commercial and concessional imports.*
[2] *Excludes grains.*
[3] *Excludes wheat.*
[4] *Includes processed fruit, vegetables, meat, seafood.*
[5] *Includes products not listed.*

agency's limited financial capacity to purchase commodities has limited its influence on prices and, hence, on production.

Meanwhile, private industry controls the production of coffee, bananas, cardamom, rubber, livestock, sorghum, cotton, molasses, and sugar. Producer prices for sugar are decided by mutual agreement among producers, processors, and the Government.

Over the past several years, the Guatemalan Government, with support from the U.S. Government, has worked with small producers to expand their incomes and diversify their production. The primary vehicles of this policy have been projects demonstrating the technologies of small-scale production and irrigation, terracing of land, improvements in marketing infrastructure, and crop diversification.

Imports and exports

Guatemala is a net agricultural exporter, whose sales of $873 million in 1989 were far ahead of its purchases of $213 million.

The Central American region constitutes the principal market for most of Guatemala's nonagricultural exports, while the United States is its chief market for agricultural products. Virtually every major export crop except cotton, fresh vegetables, and cardamom yielded higher export earnings in 1989. Exports were up sharply for processed foods, animal products, bananas, sugar, and sesame seed.

Coffee, which accounts for about 23 percent of Guatemala's export earnings, represents a major source of Government revenue. However, in 1989, export earnings from coffee increased only moderately because of lower world prices resulting from the suspension of International Coffee Organization (ICO) quotas.

Guatemala's exports of cardamom decreased almost 10 percent in 1989 to $30.4 million after increasing since 1981.

Imports are led by bulk commodities, especially protein meals, tallow, wheat, and vegetable oils. Guatemala is also a growing import market for corn. In 1989, the country imported more than $48 million worth of beverages, prepared foods, wood products, and other high-value products.

The Government would like to achieve greater self-sufficiency in the production of staple grains, especially corn, but thus far has not had much success. Guatemala's increasing need to import corn is the result of a rapidly growing population, a growing poultry industry, low yields, and competition for resources from an expanding nontraditional agricultural sector.

Nearly all agricultural imports are from the United States, and since 1985 a substantial portion of imports of bulk commodities have been financed under U.S. Government concessional and commercial assistance programs.

Trade policy and prospects

The Government has taken steps to liberalize the economy and to make it more competitive in the world economy. Since November 1989, the value of the local currency (quetzal) has dropped 85 percent compared with the U.S. dollar. This devaluation has encouraged greater exports and has contributed to expansion in traditional as well as nontraditional agricultural sectors such as coffee, sugar, bananas, and fresh fruits and vegetables. It has also made imports more expensive.

As part of the liberalization efforts, import tariffs were reduced to a maximum rate of 35 percent.

Guatemala is a member of the Central American Common Market (CACM), which means it has special marketing arrangements with the other members: Costa Rica, El Salvador, Honduras, and Nicaragua.

The Government also has bilateral agreements with Argentina, Colombia, Mexico, and Venezuela, as well as with several European Community countries.

Since 1984, Guatemala has qualified for trade benefits from the United States under the Caribbean Basin Initiative (CBI). It seeks to support economic activity and expand private-sector opportunities in the Caribbean region through a one-way free trade area that allows duty-free access to the U.S. market through 1995 for most CBI country products.

Final negotiations are under way for Guatemala's accession to GATT, which was expected to take place by mid-1991. ■

Honduras

H

Profile of agriculture

The agricultural sector represents the mainstream of Honduras' economic, social, and political structure. Agriculture is by far the single most important contributor to the gross domestic product, employment, and export earnings and is also the means of livelihood for over 40 percent of the economically active population.

Farming in Honduras is primarily carried out by small producers with limited technology who are engaged in subsistence farming. Large commercial plantations of bananas, sugarcane, and African palm are the exceptions to this rule.

An estimated 17 percent of total area under cultivation is irrigated, and the use of fertilizer, although increasing in recent years, is still not widespread. Productivity is generally low and depends largely on rainfall.

Production highlights

The devaluation of the Honduran currency in early 1990 forced dramatic increases in prices at virtually all levels, resulting in shortages of several commodities and inputs, as well as hoarding, price speculation, and clandestine trade with neighboring countries.

In addition, unseasonally heavy rainfall during November 1990 caused extensive flooding on Honduras' northern coastal plains, which resulted in substantial losses to agriculture and considerable damage to property.

Production and export of bananas fell during 1990 because of this flooding and a prolonged midyear dispute between Honduras' largest banana producer (Chiquita) and its suppliers.

Coffee production has increased considerably in recent years, climbing to a record high of over 1.9 million bags during 1989/90. The upward trend is fueled by increases in production area and improved farm management techniques.

Seafood production in Honduras has increased at an average annual rate of 33.5 percent in volume since 1986. This growth is primarily the result of new investment in aquaculture (shrimp farming), but sea catch and pond production of shrimp have also increased. This trend is expected to continue and to generate about $100 million in earnings.

The livestock sector is composed mostly of small, unspecialized producers, 75 percent of which are dual-purpose operations. Total numbers of cattle and oxen are estimated at approximately 2.4 million, which suggests an annual decline of 1.5 percent over the past 5 years. Depressed producer prices for beef and milk during the 1980's, a high rate of cow slaughter, and a large number of contraband exports of live animals are responsible for the poor performance of the industry.

Most oilseed products in Honduras are made from locally produced African palm oil. During 1990, palm oil production increased by nearly 3 percent as a result of replanting and improved weather.

The short-term outlook is for continuing modest improvements in production area and volume; however, unless there is extensive replanting, production may begin to fall by the

Agricultural Production

	1988/89	*1989/90*
	thous. metric tons	
Crop production [1]		
Bananas [2]	47.0	42.0
Coffee [3]	1.6	1.9
Corn	440.5	509.6
Palm oil	71.0	72.7
Sugar	184.2	199.0
Wood (sawn) [4]	177.8	168.5
	thous. head	
Livestock numbers		
Beef and dairy cattle	2,423	2,381
Hogs	706	706

[1] *Crop years are Jan.-Dec. for bananas, palm oil, and sawn wood; Oct.-Sept. for coffee; July-June for corn; and Sept.-Aug. for sugar.*
[2] *Million 40-pound boxes.*
[3] *Million 60-kilogram bags.*
[4] *Million board feet.*

Honduras at a Glance

Population (1990): 5.3 million
Urban population: 40%
Population growth rate: 2.9%
Per capita income (1990): $527
Arable land area: 24,284 square kilometers; 20% annual or temporary crops, 15% permanent crops, 30% natural pastures, 34% cultivated or improved pastures
Major crops: Coffee, bananas, wood, sugarcane, corn, palm oil
Livestock sector: Beef and dairy cattle, poultry, aquaculture
Leading agricultural exports: Bananas, coffee, seafood, wood, fresh fruits, beef, sugar
Leading agricultural imports: Wheat and other grains, beverages, dairy products, prepared foods, feed ingredients
Agricultural imports as a share of total imports (1989): 13%
U.S. share of total agricultural imports: 52%
Percent of labor force in agriculture: 44%
Membership in economic or trade organizations: CACM, IBRD, IDA, IDB, IFAD, IFC, IMF, OAS, SELA

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal feed ingredients (except grains)	11.5	99
Cotton	1.2	9
Beverages (except fruit juices, wine)	19.0	11
Dairy products	16.4	5
Fats and oils		
Animal	1.8	56
Tallow	1.2	100
Vegetable (except palm oil)	0.6	4
Fruit juices	1.5	95
Fruits and nuts (except bananas)	1.5	77
Grains		
Wheat	20.2	100
Flour and other products	4.8	6
All others	9.0	7
Oilseeds	4.2	93
Planting seeds	1.9	65
Prepared foods	12.2	36
All agricultural products[2]	112.1	52

[1] *Values are shown in U.S. dollars at U.S.$1=2* lempiras. *Includes commercial and concessional imports.*
[2] *Includes products not listed.*

mid-1990's as most plantations will have surpassed their useful life.

During the past 2 years, sugarcane harvested area has rebounded, to include an estimated 28,000 hectares during 1989/90. However, flooding on sugarcane plantations is likely to keep 1990/91 output near 1989/90 levels.

Corn production increased by 15 percent in 1989/90, reaching approximately 510,000 metric tons. Despite flooding, it appears that recent legislation granting land tenure and other economic incentives to grain farmers may be successful in raising 1990/91 corn production to an estimated 560,000 metric tons.

Farm and food policy

The Honduran Government sets producer support prices for corn, sorghum, rice, beans, and soybeans. Beginning in 1991, the Honduran Agricultural Marketing Institute (IHMA) will make grain prices follow trends of world market prices by means of a "price band" mechanism. This strategy is geared toward improving local grain distribution while maintaining equitable prices for both producers and consumers.

Retail price controls are in effect for vegetable shortening, wheat flour, sugar, and cornstarch. The number of commodities to which retail price controls are applied has been greatly reduced over the past 2 years, and there are plans to eliminate all retail price controls during 1991.

Because of Honduras' weakening food security position over the past several years, the Government has made basic grain production one of its chief priorities. In an attempt to reduce the gap between production and demand, the Government has increased credit to producers, liberalized credit requirements, and increased producer guarantee prices.

Beginning in 1991, crop insurance will be provided through a trust fund established by the Agricultural Contingency Fund Law. Financial assistance will be provided to participating farmers whose crops have been damaged or destroyed by natural disasters, pests, diseases, and so forth.

Imports and exports

In 1989, Honduras exported $746 million in agricultural products and imported $112 million. Major exports included bananas, coffee, seafood, wood, fresh fruits, beef, and sugar. Main imports included wheat, beverages, dairy products, prepared foods, animal feed ingredients, and other grains.

The United States, Honduras' chief trading partner, supplies an estimated 52 percent of its imports and purchases 39 percent of its exports. Currently, there are opportunities for continued U.S. exports of wheat, corn, rice, oilseeds, protein meals, tallow, and prepared foods.

Trade policy and prospects

During most of 1990, a temporary tax amounting to 12 percent (f.o.b. value) for traditional exports and 9 percent for nontraditional exports was applied on Honduran exports. The tax will be phased out during 1991.

Exports of main commodities, such as coffee and lumber, are channeled through state agencies. Other exports are monitored by the Ministry of Economy and the Central Bank. Licensing is required for all exports.

Monetary policies enacted in 1990 effectively devalued the lempira and passed most foreign exchange transactions to a private interbank market.

Even though Central Bank licensing is still required for imports, foreign exchange for import purposes can now be obtained more freely (at market value). Moreover, nearly all import duties are being gradually reduced over a 3-year period. ■

Hong Kong

H

Hong Kong at a Glance

Population (1990): 6.0 million
Urban population: 95%
Population growth rate: 1.2%
Per capita income (1990): $12,000
Total land area: 1,064 square kilometers; 9% agricultural
Major crops: Vegetables
Livestock sector: Poultry, hogs
Leading agricultural exports: Shrimp, fish
Leading agricultural imports: Fruits, vegetables, fish, meat, dairy products, cereals, processed foods, cotton, alcoholic beverages
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: 17%
Percent of labor force in agriculture: 2%
Membership in economic or trade organizations: GATT

Profile of agriculture

Hong Kong has a very small agricultural base: only 9 percent of the land area is devoted to farming, and only about 2 percent of the labor force is engaged in agriculture and fisheries. Agriculture's contribution to the gross domestic product is less than 1 percent, and the industry is declining as a result of high rents, a labor shortage, and increasingly restrictive pollution controls.

Nevertheless, Hong Kong's per capita consumption of protein is one of the world's highest. Local producers can satisfy a small portion of the demand for foodstuffs—notably fresh and perishable foods including vegetables, poultry, pork, and fish—but most of Hong Kong's food and agricultural product needs are met by imports.

Production highlights

Pork and poultry production are expected to decline in 1990 as more farms close down. Output of poultry meat is estimated at 32,000 metric tons. Local farmers raise broilers, pigeons, ducks, and quail.

Hog numbers were estimated at 413,000 head by the end of 1990. The industry has been under great pressure from the Waste Disposal (Livestock Waste) Bill, which bans livestock production in urban areas and imposes stricter pollution controls on farms in the rural New Territories.

Locally produced poultry and pork generally command higher prices than imported live and frozen products, as 95 percent of the population are Chinese who prefer fresh food.

Agricultural Production

	1990
	thous. metric tons
Crop production	
Vegetables	141
	thous. head
Livestock numbers	
Hogs	413
Poultry	
Chickens	14,025
Pigeons	5,548
Ducks	2,690

Farm and food policy

Compared with other industries in Hong Kong, the food manufacturing sector is small, with only about 930 establishments. The gross output of this sector came to over $800 million, of which about 20 percent was exported. Major items produced in Hong Kong include instant noodles, macaroni, spaghetti, bread, biscuits, pastry, and cakes, with practically all ingredients imported from overseas suppliers.

Manufactured dairy products include milk, cream, and yogurt, and other processed foods are soy sauce, oyster sauce, shrimp paste, gourmet powder, frozen dim sums, and canned and preserved items.

Rapidly shifting lifestyles have changed Hong Kong's retail food market tremendously in recent years. New businesses such as supermarkets and fast-food outlets have multiplied in numbers and are now part of the common street scene. Indeed, they are replacing traditional street corner groceries, food stores, and small tea houses and restaurants at a fairly rapid pace. People 30 years old and younger (who make up more than half of the Territory's population) show a definite preference for these new establishments.

A special characteristic of Hong Kong is that more than half of all meals are consumed in restaurants. The typically small, hot homes are not conducive to elaborate cooking, which is left to the professional chef. Family gatherings are held in restaurants rather than at home. Hotels are the centers of high society in Hong Kong, and hotel chefs and food and beverage managers are leaders in the food industry. Tourism supplies approximately 4 million extra food consumers per year.

Imports and exports

Hong Kong imports an estimated $5 to $6 billion worth of agricultural products each year. The market for foodstuffs, of which about 80 percent are supplied by imports, is estimated at $3.2 billion.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beef	93	21
Brandy	193	[2]
Cotton	376	15
Fruits	513	40
Ginseng	198	65
Hogs	185	[2]
Poultry, frozen	169	54
Prawns/shrimp	285	1
Rice	149	3
All agricultural products [3]	6,670	17

[1] *Values are in U.S. dollars at U.S.$1=7.80 Hong Kong dollars.*
[2] *Less than 0.5%*
[3] *Includes forest products, cigarettes, and other products not listed.*

Fruit and vegetables made up the largest import category, equivalent to about a quarter of the import total, closely followed by fish and fishery products. Other major food imports include meat, dairy products, cereals, and other processed food products.

China is the largest supplier, accounting for about 40 percent of the total. The United States is second with a 17-percent share worth about $1.2 billion.

Hong Kong imported over $750 million worth of fresh fruits and vegetables in 1990. Citrus fruits account for about 40 percent of fruit imports. The United States is the largest citrus supplier, accounting for over 85 percent of the total. Noncitrus imports consist chiefly of apples, grapes, pears, bananas, and berries and stonefruit.

China is the largest supplier of traditional Chinese vegetables. Hong Kong also imports a wide variety of vegetables from Australia, Thailand, and the United States. The most popular are cabbages, beans, melons, lettuce, tomatoes, and potatoes.

Hong Kong has a seafood-loving populace and imported more than $100 million in seafood in 1989, including prawns, shrimp, sharksfin, and abalone. Local fisherman also supply a significant number of fish, prawns, and shrimp to the domestic market. Prawns and shrimp are Hong Kong's most important agricultural exports.

The territory imports live animals and poultry, as well as frozen meats to satisfy the domestic poultry and meat market. Live pigs, cattle, chickens, and other poultry are imported from China for the fresh market. Frozen meats have gained increasing acceptance over the past decade, with the growing number of working women.

Unlike the traditional Chinese housewife, who frequents the market every day, modern housewives keep meats in the refrigerator, thus reducing the difference in freshness between fresh and frozen meats. In most cases frozen products are sold at prices 20 to 30 percent below freshly slaughtered meats.

The rapidly expanding fast food business is also an important consumer of U.S. frozen poultry. Quality imports are popular at the upper end of the market catering to tourists, business entertaining, expatriates, and high-income families. Here U.S. beef finds its market.

Trade policy and prospects

Hong Kong is virtually an open market. There are no import tariffs, but revenue duties are assessed on tobacco (including cigarettes), alcoholic beverages, and soft drinks—both imported and domestic. Regulations pertaining to food safety and health standards have generally not posed problems for U.S. food exports.

All imported (and domestic) prepackaged food is subject to labeling regulations. Imported shipments of unprocessed meats and poultry require valid inspection certificates.

Under a decades-old agreement, in 1997 Hong Kong will be transferred from British to Chinese control. Ultimately, Hong Kong's economic performance will be determined by how smoothly this transfer proceeds. China has pledged to preserve Hong Kong's capitalist system and to grant Hong Kong a high degree of autonomy.

Conceivably, the relationship exporting countries currently enjoy with Hong Kong could give those countries a foot in the door of the Chinese market (with over 1 billion consumers) once the transfer takes place.

For the present, Hong Kong already plays a role in the economy of China, albeit a small one. Hong Kong companies currently supply Western hotels in China with many high-value food products.

For the foreseeable future, Hong Kong will continue to play a role in agricultural development in China. This will allow import demand for high-value products to continue to grow until China develops its own food industry and can produce the higher quality foods for which its people are developing tastes. ■

Hungary

H

Profile of agriculture

Agriculture plays an important role in Hungary's overall economy, contributing about 20 percent to the gross domestic product.

Although dryness can be a problem, the climate is generally good for producing crops throughout the country. About 70 percent of the land area is cultivated, and the percentage of arable land is one of the highest in Europe. Grasslands occupy a relatively small part of Hungary.

About half of agricultural production comes from cooperatives, 14 to 15 percent from state farms, and the rest (35 to 36 percent) from small-scale private farms, including many part-time farms. The importance of the different sectors varies by commodity.

The average size of the 1,250 agricultural cooperatives is about 4,200 hectares, while the 130 state farms average 7,300 hectares each. The average area of the more than 150,000 private full- and part-time farms is less than 1 hectare. These farms work closely with agricultural cooperatives or other commercial organizations. Because private farms do not have enough crop area and machinery, they purchase much of their feed and rent equipment for land cultivation and transportation from cooperatives or market sources.

Agricultural Production

	1988	*1989*
	thous. metric tons	
Crop production		
Apples	1,131	959
Barley	1,183	1,340
Corn	6,256	6,996
Potatoes	1,407	1,332
Rapeseed	736	580
Sugar beets	4,511	5,301
Sunflowerseed	716	699
Vegetables	2,248	1,993
Wheat	7,026	6,540
	mil. head	
Livestock numbers		
Cattle		
Beef	1.7	1.6
Dairy	0.6	0.6
Hogs	8.3	7.7
Poultry		
Broilers	7.6	18.5
Layers	26.9	26.0
Ducks	1.8	1.8
Geese	1.1	1.5
Turkeys	0.6	0.8
Sheep	2.2	2.1
	thous. metric tons	
Animal product output		
Beef and veal[1]	275	278
Butter	35	38
Cheese	54	55
Eggs[2]	4,585	4,576
Milk	2,706	2,698
Pork[1]	2,312	1,317
Poultry meat[1]	630	580
Sheep meat and lamb[1]	41	44

[1] *Slaughter animals in live weight.*
[2] *Million eggs.*

Production highlights

Drought in 1989 and 1990 hurt agricultural production. There was no gain in total output in 1989 as animal production (which accounted for half of the total) decreased by almost 3 percent. Estimates for 1990 indicated a falloff in crop production, primarily as the result of smaller corn, sunflower, and horticultural crops. A sizable decrease was expected in livestock production, particularly beef and pork.

The 1989 grain crop of 15.3 million metric tons was sufficient to meet overall demand. However, the 38-percent decrease in the 1990 corn crop tightened the feed situation. Consequently, domestic prices are up, despite declining animal numbers.

The 1989 oilseed crop was slightly larger than the year before as improved yields more than offset area reductions. The 1990 sunflower crop was down an estimated 17 percent. Small oilseed crops are insufficient to fully supply Hungary's crushing capacity.

Horticultural production (vegetables, fruits, grapes, and wine) decreased in both 1989 and 1990. The overall domestic supply of these products is good, but the output of processing industries dropped because

Hungary at a Glance

Population (1990): 10.4 million
Urban population: 62%
Population growth rate: -0.2 %
Per capita income (1989): $1,826
Total land area: 93,033 square kilometers; 70% agricultural, 18% forests
Major crops: Grains, oilseeds, fruits, vegetables, grapes
Livestock sector: Hogs, poultry, dairy, and beef cattle
Leading agricultural exports: Pork and canned meat, poultry, wheat, wine, canned vegetables, canned fruit, live cattle, live sheep, apples, fruit juices, sausages and salami
Leading agricultural imports: Soybean meal, forest products, cotton, coffee, tropical fruits, hides
Agricultural imports as a share of total imports: 9%
U.S. share of total agricultural imports: 2%
Percent of labor force in agriculture: 19%
Membership in economic or trade organizations: Cairns, Europe Council, GATT

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal origin meals[2]	44	0
Cocoa	21	0
Coffee	48	0
Corn	24	8
Cotton	66	4
Forest products	109	[3]
Hides	27	6
Soybean meal	196	[3]
Tropical fruits	37	0
All agricultural products[4]	837	2

[1] *Values shown in U.S. dollars at U.S.$1=59.09 Hungarian* forints.
[2] *Includes bone, feather, and meat meal products.*
[3] *Negligible.*
[4] *Includes products not listed.*

of shortages of some raw materials. At the same time, however, markets for wine and lower quality vegetable and fruit products decreased in East European countries.

Broilers and eggs led the 3-percent decrease in animal production in 1989. Beef cattle and hog sales were about the same as in 1988, but animal numbers decreased. A further drop in output appeared likely in 1990 as output was constrained by high feed prices, shrinking domestic demand, and reduced export subsidies. Overproduction of dairy products and geese was substantial. Milk production was flat, but larger exports could not offset a huge drop in domestic purchases.

Farm and food policy

Hungary's current agricultural policy is based on the transformation to a market economy, land reform, and continued export orientation for several commodities.

Producer prices for most agricultural products are set by market forces rather than the Government. At the same time, consumer prices have been liberalized and extensive consumer subsidies have been eliminated. A declining standard of living and rising food prices have reduced domestic food sales.

Although farm gate prices have risen, prices of industrial and imported inputs have increased even more. The Government has lowered producer subsidies because of budget constraints, and repeated devaluation of the Hungarian currency has made imported inputs more expensive.

A major unanswered question about the future of Hungarian agricultural policy concerns privatization of large farms and state-owned agribusiness firms. Both domestic and foreign investors are putting private capital into food processing and agricultural trade firms. Many of the large socialized farms are operating in the red.

However, it is difficult to change both the physical and organizational structure of these farms because of land legislation and constitutional considerations. The situation is further complicated by the lack of a viable market for agricultural land.

Imports and exports

Hungary is the only East European country that has become a net exporter of a wide range of agricultural products. Sales in 1989 totaled $2.2 billion (including forest products). These agricultural and food industry export revenues are essential to the national economy—they account for 22 to 25 percent of total exports.

Conversely, the country's debt and limited foreign currency reserves keep agricultural imports low. The total in 1989 was $837 million.

The most important markets for Hungary's traditional agricultural export commodities—such as live animals and meat, poultry, grains, wine, and horticultural products—are the European Community (particularly Germany, Italy, and France); neighboring countries (Yugoslavia and Austria); and the Soviet Union and other East European countries (Czechoslovakia and Poland).

The United States is usually the eighth or ninth largest export destination for Hungary's agricultural exports, taking approximately 3 percent of the total.

Of $837 million in agricultural imports in 1989, about 2 percent came from the United States. The decline in U.S. agricultural imports, from $65 million in 1985 to $18 million in 1989, was mainly the result of a decline in sales of soybean meal and cotton.

Total agricultural imports in 1990 will be higher than in 1989, mainly because of drought-induced feed grain imports. Drought has increased Hungary's barley and corn imports from a relatively low level to several hundred thousand metric tons. At the same time, very good wheat harvests permitted the continued export and feed use of wheat.

Trade policy and prospects

Although the Government encourages agricultural exports by means of export development credit programs and export subsidies, Hungary is a member of the Cairns Group and supports a market-oriented position in the Uruguay Round. Recent reductions in export subsidies resulted from budget constraints rather than trade policy.

The partial liberalization of foreign trade in Hungary has slowed the downturn in its imports. Total agricultural imports were expected to rise in 1990 because of the decentralized, more flexible marketing systems and the removal of some administrative limitations. ■

India

I

Profile of agriculture

Agriculture provides the livelihood for over 70 percent of India's 850 million people. It accounts for 33 percent of the nation's gross national product, down from 45 percent 20 years ago. Farm size is generally small—most holdings are less than 1 hectare.

Average yields and input use are low, except in key surplus production areas, and production fluctuates widely, depending on monsoon rainfall.

Food grain and pulse crops account for two-thirds of agricultural production. India is the world's largest producer of sugar, tea, peanuts, and pulses.

The rapid depletion of forests in India and its effect on resources, climate, and biodiversity are of growing concern. In comparison with other countries, India's per capita forest resources are very small. In the early 1980's, India had 0.11 hectares per person of forest resources, versus 0.13 for China, 1.3 for the United States, and 14.2 for Canada.

The situation in India is further aggravated by the low productivity of the country's forests. Projections indicate that the remaining forest area can sustain a maximum annual harvest of only 39 million cubic meters. That compares with an estimated 100 million cubic meters needed every year to meet just the energy needs of the rural population. In rural areas, wood supplies more than two-thirds of the energy needs.

In addition to fuel wood requirements, India's industries need wood materials for packaging, pulp and paper, housing, and other wood products. Many of these applications are expected to have rapidly rising demands.

Agricultural Production

	1988/89	*1989/90*
	mil. metric tons	
Crop production[1]		
Coarse grains	31.5	34.3
Cotton[2]	12.6	13.3
Peanuts	9.7	8.1
Pulses	13.9	12.6
Rapeseed	4.8	4.1
Rice	70.5	74.1
Soybeans	1.6	1.7
Sugarcane	204.6	212.0
Tea[3]	684	715
Wheat	54.1	49.7
	mil. head	
Livestock numbers		
Buffalo	72	74
Cattle	193	195
Goats	105	107
Sheep	52	53
	thous. metric tons	
Animal product output		
Eggs	1,550	1,785
Milk	49,100	51,500
Poultry meat	221	298
Sheep and goat meat	527	550
Wool	42	43

[1] *Crop years vary by commodity.*
[2] *Million 170-kilogram bales.*
[3] *Thousand tons.*

Production highlights

Indian farm production increased again in 1990/91, following good rains for the third year in a row. Food grain and pulse production is expected to reach 176 million metric tons, up from 170.6 million tons in 1989/90. Rice production has shown the largest increase and is expected to reach 75 million tons.

Total oilseed production is expected to be up slightly to 19.7 million tons. The rapeseed and mustard crop should reach a record 0.8 million tons in 1990/91 as a result of yield and area increases, but the peanut crop was down almost 1 million tons because of drought in a major production region.

India at a Glance

Population (1990 est.): 850 million
Urban population: 25%
Population growth rate: 2.01%
Total land area: 2,973,190 square kilometers; permanent crops 1%, meadows and pastures 4%, forest and woodland 23%, other agricultural uses 17%
Major crops: Black pepper, coarse grains, coffee, cotton, jute and mesta, peanuts, potatoes, rice, sugarcane, tea, tobacco, wheat
Livestock sector: Buffalo, cattle, poultry, sheep
Leading agricultural exports: Spices, cashews, coffee, marine products, oil meals, rice, tea
Leading agricultural imports: Edible oils, pulses, rice, wheat
Agricultural imports as a share of total imports (1987/88): 7%
U.S. share of total agricultural imports (1987/88): 9%
Percent of population in agriculture: 70%

Indian cotton production will drop below 13 million bales in 1990/91 because of late rains and pest damage, while excellent yields will result in a 22-million-ton increase in sugarcane production. Raw sugar production is expected to be 12.8 million tons.

Good weather also helped tea production, which was up 4 percent to 715,000 tons in 1989/90.

In the livestock sector, production of poultry meat continues to expand, increasing 10 percent from 1989/90.

Cattle production, however, is hampered by inadequate feed and fodder. The buffalo herd has grown somewhat faster because there are markets for both its milk and meat.

Farm and food policy

The major goals of Indian agricultural policy continue to be self-sufficiency in food staples and adequate food supplies at affordable prices for low-income consumers.

Expanding cereal production is one of India's major objectives. The focus in recent years has been on increasing irrigation potential; improving irrigation management; popularizing the use of inputs such as high-yielding seed varieties, fertilizers, and agricultural chemicals; and improving agronomic practices.

The Government annually announces support and procurement prices for all major crops, including wheat and rice. Farmers receive fertilizer at subsidized rates, low-cost electricity for irrigation, and reduced interest rates on farm credit.

The Government's objective of providing reasonable prices for basic food commodities is achieved through the Public Distribution System (PDS), which comprises a network of fair price shops numbering over 350,000 and monitored by the state governments. Channeling basic food commodities through PDS serves both as a conduit for reaching the truly needy as well as a system for keeping general consumer prices in check.

The quantity of wheat and rice distributed through the PDS is around 17 to 20 million metric tons annually, or roughly 10 percent of total supplies. Theoretically, the PDS covers the entire population, irrespective of income. In practice, however, the PDS benefits primarily the urban poor and middle class because most of the fair price ration shops are located in these areas. The issue price at which the central Government supplies grains to the state governments is generally 15 to 20 percent below the open market price.

Imports and exports

India is a net agricultural exporter, with sales of $2 billion in 1988/89 more than offsetting imports of $1.2 billion.

Leading Indian agricultural exports are tea, oilmeals, cashews, coffee, and rice. The country has also recently positioned itself as an exporter of basic commodities.

Tea exports have remained around 220,000 tons, as increased domestic use keeps pace with increases in production. The Soviet Union is the largest buyer of Indian tea, with imports of around 120,000 tons.

Oilmeal exports (mainly soybean and peanut meal) provide an important source of revenue; they reached 2.3 million tons in 1990/91.

For 1991, India has made export commitments for 1.4 million tons of wheat, two-thirds of it to the Soviet Union, although as recently as 1988, after the drought, India imported 2 million tons of wheat. Rice exports may reach 600,000 tons in 1990/91, up 50 percent from the previous year.

Cotton exports increased to 233,000 tons in 1989/90 and may increase 10 percent this year as India tries to become a consistent supplier of raw cotton.

Trade in sugar has shifted from importing 256,000 tons in 1989/90, to self-sufficiency and the possibility of 200,000 tons in exports in 1990/91.

Indian agricultural exports to the United States consist mainly of cashews, spices, coffee, and sesameseeds.

India's agricultural imports vary dramatically from year to year, depending on the effects of the monsoon. The country usually imports edible oils and pulses, although a shortage of foreign exchange has recently constrained imports.

India has a serious and growing problem with deforestation, attributed to increasing demand for cropland, fuel, and wood products. The country will become increasingly dependent on imports to meet its wood needs; however, the duty structure on forest products has been a drawback to expanding sales of U.S. wood products there.

In 1989, India imported vegetable oil, cereals, bovine semen, dry peas, and almonds from the United States.

Trade policy and prospects

Imports have generally been used only to meet domestic shortfalls and to halt unacceptable swings in consumer prices. Farm exports have been a secondary goal, as adequacy of the domestic food supply takes precedence. However, large grain reserves and increasing concern about obtaining foreign exchange have led India to focus on export opportunities.

Foreign trade of virtually all farm commodities is controlled either by Government monopolies—a combination of quotas, duties, and minimum export prices—or by an outright ban on trade.

The monopolies, such as the Food Corporation of India (cereals) and the State Trading Corporation of India (edible oils and sugar), implement trading decisions made by interministerial committees.

Although many exports are handled by private traders, most are regulated to assure adequacy of domestic supply. Pulses are the only major farm commodity that can be imported by private traders, subject to a 10-percent duty.

Almond imports have also been partially liberalized as the result of an agreement between India and the United States to ensure import access for at least $20 million in almond trade. ■

Indonesia

I

Profile of agriculture

Indonesia is the fifth largest country in the world, with a population of 180 million people. About 70 percent of the Indonesian population is rural.

Agriculture accounts for nearly 22 percent of the gross domestic product in Indonesia and employs about half the country's labor force.

Although rural land ownership averages about 0.5 hectare per family and farming is labor intensive, production techniques, particularly cultural practices for rice, are sophisticated in some cases.

Rice is the most important food crop, with per capita availabilities of about 155 kilograms a year. Other important food crops are corn, soybeans, cassava, and peanuts. Indonesia is also a leading producer of plantation crops such as rubber, sugarcane, palm and coconut oil, copra, coffee, cocoa, and spices. The country is a giant in the processing of forest products.

Agricultural Production

	1988/89	*1989/90*
	mil. metric tons	
Crop production		
Cassava	17.12	15.88
Coconut oil	0.67	0.74
Copra	1.19	1.28
Corn	5.20	5.00
Palm oil	1.60	2.15
Peanuts	0.84	0.88
Rice, milled	29.10	29.20
Soybean meal	0.20	0.16
Soybeans	1.20	1.10
Sugar	1.92	2.18
Tea	0.15	0.16
	1988	*1989*
	thous. head	
Livestock numbers		
Dairy cattle	250	260
Hogs	6,480	7,050
Sheep	5,830	5,870

Production highlights

The agricultural economy continued a healthy expansion in 1990, led by gains in forest products, food crops, and estate crops. Good weather provided for another record rice harvest and larger corn and soybean crops.

After rice production increased in the early 1980's as a result of greater use of inputs, the rate of increase in production slowed as input use leveled off. Over 90 percent of the rice produced in Indonesia is irrigated by means of a terracing system developed over centuries and supplied by recently developed canals. About 60 percent of the country's rice is produced on Java, which has 24 percent of the arable land.

Corn production in 1990 was estimated at 5 million metric tons. Production is on a gradual upturn because of increased demand from the feed industry. A Government deregulation measure in 1989, allowing free trade of corn, could stimulate interest in planting it for the export market. Corn is grown mainly as a secondary crop in the dry season, after the main rice crop. About half the corn is consumed by humans.

Although good weather and larger plantings helped increase soybean production to record levels in 1990, sizable imports were still required to meet the growing demand. About 80 percent of soybeans are consumed as food products.

Oil palm is one of the most rapidly expanding estate crops. In just a few years the industry has moved from mostly Government-held plantations to increased private investment with an export focus. Indonesia exported about 1 million metric tons of palm oil in 1990 and is poised to increase this figure in coming years.

Exports of cocoa have almost tripled over the past 5 years as the result of an aggressive planting campaign.

Forest products, led by plywood, are an extremely important foreign exchange earner, accounting for $3.3 billion or almost 50 percent of total agricultural sector earnings in 1989.

Plywood production capacity went from 8.9 million cubic meters in 1988 to 9.8 million cubic meters in 1989. Because of environmental priorities, the Indonesian Government will not allow additional plywood mills to be opened. It also has established a limit of 32 million cubic meters a year on total log production.

Indonesia at a Glance

Population (1990): 180 million
Population growth rate: 1.8%
Per capita income (1990): $550
Total land area: 1,826,440 square kilometers; 8% arable
Major crops: Rice, corn, soybeans, cassava, peanuts, palm oil, coconut oil
Livestock sector: Poultry, swine
Leading agricultural exports: Rubber, wood products, fish, spices, vegetable oils, coffee
Leading agricultural imports: Cotton, wheat, soybeans
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: 16%
Percent of population in agriculture: 56%
Membership in economic or trade organizations: ASEAN, Cairns, GATT

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cotton	376.7	34
Oilseeds	149.1	28
Vegetable oils	140.4	0
Wheat	286.9	18
Others	764.7	6
All agricultural products	1,717.8	16

[1] *Values are shown in U.S. dollars at U.S.$1=1,779 rupiahs.*

The livestock sector continues to grow at a steady pace, with several large feedlots in the planning stages and many new poultry projects on line. The dairy sector seems stalled at around 250,000 milk cattle, although efforts continue to improve management and genetics in the herd.

Farm and food policy

The Government's program of economic deregulation is crucial to Indonesia's efforts to create employment, maintain growth, and increase export earnings. Since 1983, deregulation packages have introduced substantial liberalization in the economy.

The current 5-year development plan, begun in April 1989, proposes to shift the burden of economic development from the Government to the private sector.

The Government promotes consumption of domestically produced products, but as the rate of population growth surpasses the expansion in domestic rice production, wheat and other starchy staples will become increasingly important as substitutes. In an effort to strengthen rice self-sufficiency, the Government encourages production of secondary food crops, such as corn, soybeans, and cassava.

Imports and exports

Indonesia enjoys a sizable surplus in its agricultural trade, with exports totaling $7.2 billion in 1989 versus imports of $1.7 billion.

Agricultural exports in 1989 were up 3 percent from the year before, led by forest products (particularly plywood), rubber, fisheries (mostly shrimp), coffee, vegetable oils (principally palm and coconut products), spices, and tea.

Indonesian agricultural exports to the United States exceeded $1.1 billion in 1989, a marginal decline from the preceding year that was partly the result of lower world prices for Indonesia's natural-resource-based products. Rubber, wood products, spices, fisheries, vegetable oils, and coffee were the main U.S. purchases.

There have been steady increases in exports of palm and kernel oil over the past few years. Combined exports of these products are expected to reach around 1.2 million tons in 1990/91, a 17-percent increase over the previous year. Coconut oil exports also rose: in 1990, exports were 210,000 metric tons, a 10-percent increase.

The primary agricultural imports in 1989 were cotton, wheat, feedstuffs, oilseeds, and sugar.

Indonesia imported $269 million in agricultural products from the United States in 1989, a 13-percent increase in value over 1988.

The United States continues to capture a larger share of Indonesia's expanding cotton market and is expected to remain the largest supplier in 1991. Dependable quality and regular supply give U.S. cotton a competitive edge. The Indonesian textile industry is in the midst of a boom, with growth between 15 and 20 percent annually. This growth is fueled by the export trade, but demand for cotton and cotton-blend garments is on the increase domestically as well.

Wheat imports rose about 4 percent in marketing year 1989/90 (July–June) because of increased demand. Wheat products are gaining acceptance as substitutes for rice, particularly in urban areas in the form of noodles. Major wheat suppliers are Australia, Canada, Saudi Arabia, and Argentina. The U.S. share of the Indonesian wheat market has fallen from 50 percent in the early 1980's to about 14 percent in 1990, mainly because of lower priced competitor wheat.

The United States captured a larger share of the 0.5-million-ton soybean market in 1989/90 (October-September), shipping 142,000 metric tons to Indonesia. Soybeans from the United States face competition from China, Argentina, and Brazil.

Trade policy and prospects

Although Indonesia has been on a course of economic deregulation, agricultural trade has benefited from few significant new measures over the past year. As part of the economic liberalization program, the Government now allows unrestricted imports of certain high-value food products, such as orange juice and nuts.

Further reductions in import restrictions are expected. For example, late in 1990, the Indonesian Government partially opened the market for imports of grapes, citrus, apples, and pears under a quota system. An earlier Government decision removed restrictions on corn imports.

Trade in major commodities is either directly controlled by the Government (wheat, sugar, soybeans, and soybean meal) or is controlled by Government-appointed private companies. Trade restrictions on some items may be removed in the near future. ■

Ireland

Ireland at a Glance

Population (1990): 3.5 million
Urban population (est.): 37%
Population growth rate: minus 0.5%
Per capita income (1990 est.): $8,170
Total land area: 68,892 square kilometers; 6-7% crop use, 75% animal production, 18% other uses
Major crops: Barley, sugar beets, wheat, potatoes, turnips, oats
Livestock sector: Beef cattle, dairy cattle, sheep, hogs, poultry
Leading agricultural exports: Beef, beverage bases, butter, milk powders, cheese, casein, live cattle, essential oils
Leading agricultural imports: Racehorses, lumber, corn gluten feed, essential oils, soybean meal, wheat, peptones/hide powder
Agricultural imports as a share of total imports: 13%
U.S. share of total agricultural imports: 13%
Percent of labor force in agriculture: 15%
Membership in economic and trade organizations: EC, GATT, OECD

I

Profile of agriculture

Until the mid-1950's, the Irish economy was largely agrarian. Over the past two decades the Government has promoted rapid industrialization, using various inducements to attract foreign industrial investment, especially from the United States. However, agriculture remains more important to Ireland's economy than to the economies of most other countries in the European Community (EC).

In 1989, agriculture contributed 10 percent to the gross national product, employed 15 percent of the work force, and provided nearly 25 percent of total exports.

An estimated 2 percent of the farm population leaves farming each year, with a consequent increase in average farm size, a trend that is expected to accelerate over the next few years. However, through the processing of primary products agriculture indirectly provides opportunities for significant additional employment.

The high rainfall and temperate climate are ideal for grass-fed livestock; only 6 to 7 percent of the land is cultivated. Ireland is self-sufficient in most temperate food products and a substantial net exporter of meat and dairy products, which account for 85 percent of agricultural production. The most important crops are malting and feed barley, soft wheat, sugar beets, and potatoes. Ireland must import all tropical products and most hardwoods.

Agricultural Production

	1988/89	*1989/90*
	thous. metric tons	
Crop production[1]		
Barley	1,370	1,357
Oats	107	94
Potatoes	694	581
Sugar beets	1,334	1,451
Turnips	484	550
Wheat	417	447
	1988	*1989*
	thous. head	
Livestock numbers[2]		
Beef cattle	4,040	4,309
Dairy cows	1,597	1,590
Hogs	961	995
Poultry	8,825	8,870
Sheep	4,991	5,782
	1989	*1990*
	thous. metric tons	
Animal product output		
Beef and veal	432	497
Butter	132	150
Cheese	74	70
Lamb	63	85
Nonfat dry milk	136	197
Pork	144	153
Poultry meat	79	82

[1] *Crop years are July-June.*
[2] *December count.*

Production highlights

Gross agricultural output increased over 5 percent in volume but declined over 6 percent in overall value in 1990 because of sharply lower commodity prices (down an average 12 percent).

The recovery in farm incomes since 1987 peaked in 1989, and real income slumped over 14 percent in 1990, despite good weather and increases in the production of most commodities. Production of beef and lamb rose significantly in 1990 and an increase in the EC's milk quota allowed a small gain in milk output.

Good weather and a sharp increase in winter wheat acreage produced a moderate growth in grain production. However, sharply falling prices for milk, beef, lamb, and grains because of growing European surpluses offset the higher output.

Growth in agricultural output is restricted by EC programs to reduce surpluses and costs. A notable exception is sheep numbers, which continue to grow at a rapid rate. There were 5.8 million sheep by the end of 1989, a 16-percent increase over 1988.

In recent years, Irish beef production has been restricted by declining numbers of dairy cows, as three-fourths of the beef calves traditionally are surplus dairy stock. However, efforts by the Government and farm organizations to increase the beef herd

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Corn gluten	86	91
Cotton	37	54
Essential oils	59	12
Fixed vegetable oils	45	[2]
Hardwood lumber	39	16
Peptones/hide powder	48	96
Racehorses	93	43
Softwood lumber	62	1
Soybean meal	51	12
Wheat	49	8
Wine	41	[2]
All agricultural products[3]	2,229	13

[1] *Values are shown in U.S. dollars at U.S. $1.42=1 Irish pound.*
[2] *Less than 0.5 percent.*
[3] *Includes forest products and other products not listed.*

began paying off in 1988. The turnaround in beef breeding stock meant a sharp expansion in cattle numbers in 1989 and 1990, with increased beef output from 1990 on.

Hog production, which has suffered from the relatively high cost of feed in Ireland, recovered in 1987, and numbers have been growing slowly.

Poultry and egg production and consumption have grown rapidly over the past decade, except for a temporary setback in consumption during the winter/spring of 1988/89 because of the outbreak of salmonella in Ireland and the United Kingdom.

Farm and food policy

Irish agricultural prices, policies, and structures are governed by the EC's agricultural policy.

Ireland is one of the strongest defenders of the EC's Common Agricultural Policy; however, the inevitability of change in EC support policy as a result of rising costs and GATT pressures is causing a change in attitude. The country is placing more emphasis on gaining maximum EC assistance for regional development and infrastructural improvement programs.

Imports and exports

Two-thirds of Ireland's imports come from other EC countries, principally the United Kingdom. The United States is the main trading partner outside the EC.

Irish agricultural imports totaled $2.2 billion in 1989. Import leaders included racehorses, meat, fresh fruits and vegetables, corn gluten feed, other animal feeds, peptones/hide powder, and forest products.

Good weather and less attractive input/output price ratios reduced feed demand in 1990, but imports of some other items continued to grow (although at a slower rate) because of increased consumer spending.

The United States is the only country with a positive agricultural trade balance with Ireland: U.S. agricultural exports hit a record high of $295.5 million in 1989. Increased shipments included corn gluten feed, hardwoods, plywoods, wine, racehorses, and peptones/hide powder.

Three-fourths of Ireland's exports go to other EC countries. The United Kingdom is the leading export destination; the U.S. is the largest non-EC buyer.

Ireland's agricultural exports peaked in 1989. Beef and dairy products, Ireland's principal agricultural exports, fell sharply in 1990 as EC intervention stocks rose rapidly. This situation reflects rising European surpluses, problems in the Middle East and North Africa, and worries in many importing countries about the cattle disease, bovine spongiform encephalopathy. Lamb is one of the few commodities that continue to show significant export growth.

Ireland's principal agricultural export to the United States is casein (a dairy derivative), which accounted for 87 percent of total agricultural exports to the United States in 1989.

Trade policy and prospects

Ireland is at the forefront of resistance to reform in the EC's Common Agricultural Policy, because of the importance of the high-priced EC system to the economy. The country strongly resisted GATT proposals to significantly reduce EC price supports and increase third-country access to EC markets.

However, there is a move toward relaxing some of Ireland's strict animal and plant health import regulations. Irish authorities recognize that, under the EC 1992 initiative, the lowering of these barriers is inevitable.

The Irish market should continue to be attractive to U.S. exporters, provided that the dollar does not strengthen significantly. Ireland will remain a large importer of U.S. nongrain feed ingredients, such as corn gluten feed and oilseed meals.

There is also interest in U.S. convenience foods, health foods, snack foods, fruits, nuts, and beverages. The principal constraints to the marketing of U.S. high-value products are EC tariffs and logistical problems. The relatively small size of this market means that cargoes are normally transshipped through other European ports. ■

Israel

I

Profile of agriculture

Israel is about the same size as New Jersey. Situated at the meeting point of three climatic regions, the country has a varied climate that supports a large variety of crops, from deciduous fruit trees to semitropical and tropical crops. The main factor limiting production is water.

Production is characterized by three main farm types: the large-scale (500- to 600-hectare average) collective kibbutz; the small, cooperative family farm (averaging 6 hectares); and private holdings ranging up to 100 hectares. The average for private holdings is 8 hectares.

Agriculture's share of the gross domestic product has declined over Israel's 42 years of statehood and fluctuates between 3 and 4 percent. In 1989 it dropped below 3 percent for the first time because of bad weather that hurt citrus and avocado production, as well as some other main crops. Employment in agriculture accounts for 5 to 6 percent of the work force. Agricultural exports represent 10 percent of the national total.

Agricultural Production

	1988	*1989*
	thous. metric tons	
Crop production		
Apples	112	111
Avocadoes	36	20
Citrus	1,108	1,090
Corn on the cob	105	135
Grapefruit	310	362
Grapes, table	48	54
Potatoes	216	228
Seed cotton	166	122
Tomatoes, processing	132	329
Wheat	211	202
	thous. head	
Livestock numbers		
Cattle		
Beef	127.5	127.5
Dairy	113.5	112.5
Goats	125.0	125.0
Poultry (millions)		
Layers	10.3	9.5
Broilers	12.3	11.2
Turkeys	2.5	2.0
Sheep	380.0	394.0
	thous. metric tons	
Animal product output		
Beef	66	67
Milk[1]		
Cow	936	915
Goat	19	18
Sheep	16	16
Poultry		
Broiler	179	172
Turkey	68	67
Table eggs[2]	1.6	1.7

[1] *Million liters.*
[2] *Million eggs.*

Production highlights

Israeli agriculture had a difficult year in 1989. Poor weather, including severe winter freezes and low rainfall, reduced total value of output by 1.4 percent compared with 1988, which itself was a bad year. Roughly one-fifth of cultivable irrigated land was not sown to crops.

Citrus production in 1989 was similar to 1988 levels. Most of the crop (over 800,000 tons) was sent to processors, with only 350,000 tons exported, compared with exports as high as 700,000 tons in the 1970's and early 1980's. Israel's citrus industry appears to be changing from fresh to processed exports.

Two other major crops are cotton and processing tomatoes. Area sown to cotton has dropped from a high of 65,000 hectares in the mid-1980's to 30,000 hectares in 1989 and 1990. Lint production in 1990 totaled 51,000 tons, up from the 1989 level of 46,000, but below 1988's output of 62,600 tons. Government directives limit cotton production to areas supplied with recycled or brackish water.

Improved production (especially harvesting) techniques for processing tomatoes improved the outlook for tomatoes versus cotton in 1989, and production rose to 330,000 tons. Plantings in 1990 were the same as in 1989, but yields were higher than average and production rose to 370,000 tons. Factories could not absorb this

Israel at a Glance

Population (1990 average): 4.6 million
Urban population: 89%
Population growth rate (1980-90): 1.7%
Per capita income (1990 est.): $10,600
Total land area: 20,325 square kilometers; permanent crops 5%, meadows and pastures 40%, forest and woodland 6%
Major crops: Citrus, wheat, cotton, vegetables, flowers
Livestock sector: Dairy cattle, poultry, aquaculture
Leading agricultural exports: Citrus, flowers, vegetables, cotton
Leading agricultural imports: Wheat, soybeans, feed grains, dried fruits and nuts, processed foods
Agricultural imports as a share of total imports: 9-12%
U.S. share of total agricultural imports: 34%
Percent of labor force in agriculture: 5%
Membership in trade organizations: GATT

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Barley	50.4	35
Beef, frozen	70.9	0
Beef offals	10.7	40
Corn	63.8	70
Cotton	9.7	18
Dry fruit and nuts	41.9	29
Food residues, animal feed	50.8	25
Fruit and vegetable preparations	55.7	2
Misc. food preparations	32.4	19
Rice	38.4	7
Sorghum	54.1	100
Soybeans	121.0	100
Tobacco	17.9	30
Wheat	111.7	93
All agricultural products[2]	1,269.1	34

[1] *Values are shown in U.S. dollars based on rate of exchange on day of release from Israeli customs. The average rate of exchange in 1989 was U.S.$1=1.9182 new Israeli* sheqels.
[2] *Includes forest products.*

much, and thousands of tons were destroyed for lack of processing capacity.

Production levels in the livestock sector declined slightly in 1989 as the Government reduced subsidies on dairy and poultry products. The heavy wave of immigration from the Soviet Union and Ethiopia is expected to increase the demand for these basic commodities.

Farm and food policy

The Government has abolished almost all agricultural subsidies. The only significant subsidy remaining is on water. Israel has been overdrawing its water resources. The present water deficit in the two aquifers it pumps from is estimated at 2 billion cubic meters, the equivalent of an entire year's water consumption for the economy.

This crisis has led legislators to double the price of water to almost 20 cents per cubic meter, which still does not cover the long-term cost. It has also triggered a reduction of water quotas by more than 50 percent in some parts of the country and a concomitant effort to increase supplies of recycled effluent. There is strong support for research into improved use of irrigation water and into crops—such as cotton and processing tomatoes—that can use recycled and brackish water.

Planners are encouraging citrus growers to regraft their trees with better commercial varieties than the traditional ones such as Shamouti and Valencia oranges and white (Marsh) grapefruit. In addition, large areas of marginal citrus and avocado groves will be uprooted.

The Government has announced its intention of facilitating the transition to high-value greenhouse crops, which include flowers, winter table tomatoes, and other out-of-season vegetables for export.

Imports and exports

Israel imports approximately $1.2 billion worth of food and primary agricultural products annually and exports $1.1 billion. The main imports are wheat (about 500,000 metric tons annually), soybeans (300,000 to 350,000 tons), and various feed grains. All of Israel's sorghum consumption and most corn is of U.S. origin. In the past few years, nongrain feed inputs have become sizable components of the imported feed bill, amounting to about $50 million.

Israel is self-sufficient in poultry and lamb but imports a large proportion of its beef, amounting to $80-$100 million annually, mostly from South America. Other important imports are dried fruits and nuts, valued at $50 million in 1988 and slightly less in 1989, and various processed fruits and vegetables, including jams, fruit purees, concentrates, and other inputs to the food processing industry.

Trade policy and prospects

Over the past 3 years, the Government has implemented a policy of liberalization for imports of soybeans, wheat, and feed grains. In spite of some initial difficulties, the step has proven itself, and competition in the supply of feed grains is active and healthy. The oil crushing sector has not increased its efficiency with the dissolution of the crushers' cartel, but competition is evident in the variety and quality of vegetable oils offered to consumers.

It is still early to evaluate the effects of the abolition of Government intervention in imports of wheat. Present policy allows free competition, although licenses are granted only for wheat of U.S. origin. This is in keeping with the Government's undertaking to import 1.6 million metric tons of grain and soybeans of U.S. origin.

Israel has bilateral trade agreements with the European Community (EC) and the United States. The agreement with the EC does not include agricultural goods, and the agreement with the United States calls for a mutual reduction of all customs duties to zero by 1995.

Israel bans all poultry imports and imposes strict quotas on raisins, prunes, most fresh fruits and vegetables, and some grains. However, import policy may change as a result of the Government's stringent new water policy. It is quite possible that many crops grown in Israel will be excluded as "water guzzlers." Import restrictions on such crops would have to be removed. ■

Italy

I

Profile of agriculture

Italy's agriculture is typical of the division between the agricultures of the northern and southern countries of the European Community (EC), of which Italy is a member. The northern part of the country produces primarily grains, sugar beets, soybeans, meat, and dairy products, while the southern section specializes in fruits, vegetables, olive oil, wine, and durum wheat.

Even though much of its mountainous terrain is unsuitable for farming, Italy has a large work force (slightly under 2 million) employed in agriculture. Most farms are small, with the average farm only 8 hectares.

Production highlights

Italian agricultural production in 1989 decreased by 0.5 percent in real terms from 1988. This decrease followed a decline of 2.3 percent from the previous year. Agricultural production was hurt by the winter drought.

Italy's durum wheat crop sustained considerable damage; durum production dropped 22 percent from the previous year's level, despite a slight increase in plantings. EC reform measures also contributed to the decline. The set-aside plan was introduced in Italy during 1988/89, and over 90,000 hectares of land traditionally devoted to grain production were idled.

Rice production rose 3 percent during 1989.

Oilseed production increased, as difficult marketing conditions for wheat in the fall of 1989 induced many growers to reduce soft wheat plantings in favor of barley to allow for soybean double-cropping. In addition, some growers shifted from wheat to sunflowerseed production. Production increases of 4 and 20 percent occurred for soybeans and sunflowerseed, respectively, during 1989. However, further expansion of oilseed production is limited by EC stabilizer mechanisms.

In the livestock sector, cattle numbers in 1989 were 3 percent lower than in the previous year because of reduced calf production and feeder calf imports. Poultry meat production rose slightly from 1988, while pork output declined by less than 1 percent.

Agricultural Production

	1988	*1989*
	mil. metric tons	
Crop production		
Apples	2.4	1.9
Corn	6.3	6.4
Olives	2.2	3.0
Oranges	2.2	2.1
Soybeans	1.4	1.6
Sugar beets	13.6	16.6
Tomatoes	4.6	5.7
Wheat	8.0	7.4
Wine grapes	8.1	8.0
	mil. head	
Livestock numbers[1]		
Cattle		
Beef cattle	8.8	8.9
Dairy cows	3.0	2.9
Hogs	9.4	9.3
Poultry[2]	869	879
Sheep	11.6	11.7

[1] *Estimates as of January each year.*
[2] *Thousand metric tons.*

Farm and food policy

Developments in Italian agricultural policy have been influenced largely by the EC's Common Agricultural Policy and by deeply rooted regional imbalances and structural inadequacies.

The immediate concern of the Government is to improve farm income, particularly in the southern part of the country. Long-term policy goals include continued development and modernization of agriculture to boost output and reduction of the agricultural trade deficit. The deficit was $15.1 billion in 1989, a 3-percent increase over 1988.

Italy's trade deficit affects its orientation to the Common Agricultural Policy. Imports are mainly northern products that receive both high internal price supports and import protection, while exports are primarily products such as fresh fruits and vegetables and wine, which receive weaker EC support, particularly in export subsidies.

Italy at a Glance

Population (1990 est.): 57.7 million
Urban population: 68%
Population growth rate: 0.2%
Per capita income (1989): $16,770
Arable land area: 94,000 square kilometers
Major crops: Fruits, wine grapes, vegetables, cereals, potatoes, olives
Livestock sector: Cattle, hogs, sheep, poultry
Leading agricultural exports: Wine, fresh fruit, tomato products, fresh vegetables, olive oil
Leading agricultural imports: Meat, forest products, live cattle, fish, oilseeds and meals, cotton
Agricultural imports as share of total imports: 17%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 9%
Membership in economic and trade organizations: EC, GATT, IBRD, IDA, IDB, IFAD, IMF, OECD

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Corn gluten feed	76.7	74
Cotton	576.3	21
Forest products	2,234.2	9
Oilseeds and meal	722.4	23
Tobacco	229.5	25
Wheat	1,453.9	6
All agricultural products[2]	24,567.3	4

[1] *Values are shown in U.S. dollars at U.S.$1=1,372 lire.*
[2] *Includes products not listed.*

Italy's policy goal is to obtain increased EC production and export subsidies for its Mediterranean products and EC funding to improve farm structures in the southern region. The country also supports high prices for northern products because they are considered necessary to increase production and self-sufficiency.

Imports and exports

Italy is a net agricultural importer, with purchases of $24.6 billion in 1989 versus sales of $9.5 billion. The agricultural import total in 1989 was up nearly 4 percent from 1988. The leading import items were forest products, beef and veal, pork, cattle, wheat, hides and skins, cheese, cotton, wool, and fresh and dried fruits and nuts.

Italy imported $1 billion worth of U.S. agricultural commodities (including forest products) in 1989, giving the United States a 4-percent share of the market for agricultural products. Although bulk and intermediate products such as cotton, durum wheat, and oilseeds and meals predominated, there has been a notable increase in purchases of U.S. consumer-oriented and intermediate products.

Dried fruits, especially prunes and nuts, are among the most important products for the United States in the consumer-oriented products category. Imports totaled $39 million in 1989 and were expected to increase during 1990. Another significant product in this category was corn oil, the only vegetable oil imported from the United States.

The intermediate category was led by soybean meal and nongrain feed ingredients. Italian imports of soybean meal from the United States amounted to nearly $80 million. Corn gluten feed rose to $56 million.

Tobacco declined slightly to $58 million. Seeds for planting held steady at $54 million, making Italy the third largest seed market for the United States.

Imports of forest products have also been growing (16 percent from 1988 to 1989), and the United States now has a 9-percent share of this market.

Italy's total agricultural exports in 1989 were up nearly 6 percent to $9.5 billion. The leading export items were wine and vermouth ($1.2 billion), fresh fruit ($1.2 billion), fresh vegetables ($571 million), and tomato products ($657 million). Agricultural exports to the United States totaled $660 million, led by wine, olive oil, pasta, and spirits.

Trade policy and prospects

Italy applies EC tariffs, levies, and other regulations such as phytosanitary, labeling, and health norms to imports from third countries. Its regulations on some high-value products are more rigid than those required under EC directives. For example, Italy prohibited imports of beef or beef products treated with growth hormones long before similar EC legislation was enacted.

Italy also prohibits imports of citrus fruits (except Florida grapefruit), bans imports of non-EC Northern Hemisphere deciduous fruit and table grapes, and restricts imports from Southern Hemisphere countries to certain dates. Italian food additive requirements generally are stricter than EC norms.

Health and safety issues will continue to figure in U.S.-Italian agricultural trade, foreshadowing the possibility of further controversial issues as 1992 approaches. The level of the U.S. dollar will have a bearing on exports to Italy, particularly of consumer-oriented products, cotton, and wood products.

The unification of the EC market by 1992 is likely to both help and hinder U.S. exports to Italy. On the positive side, standardized sanitary, health, food additive, and labeling requirements should make it unnecessary for exporters to develop separate product formulations and packaging to meet rules now unique to Italy. In addition, EC market integration may bolster the current trend toward greater acceptance of nontraditional foods by Italian consumers.

On the other hand, U.S. exporters can expect to face greater competition from suppliers throughout the EC as the existing barriers to intra-EC trade are dismantled.

There was a significant increase in U.S. exports of consumer-oriented and intermediate products to Italy during the 1980's. The most promising opportunities for U.S. high-value products in the future appear to be fruit juices (grapefruit, pineapple, and tropical), health foods, nuts (walnuts, almonds, and peanuts), dried fruits (prunes and raisins), wild rice, snack foods, fish and crustaceans, grapefruit, blueberries, breakfast foods, and regional and ethnic specialties. To a lesser extent, market niches exist for beer and quality wines. ■

Japan

J

Profile of agriculture

Japan is one of the most densely populated nations in the world, with about half the population of the United States concentrated along a rugged land mass about the size of Montana. Only 14 percent of its 145,000 square miles is under cultivation.

Agriculture is declining in importance to the country's economy, despite Government policies designed to keep agricultural resources from shifting into more efficient sectors. Agriculture contributes only 2 percent to national income. Japan's agriculture is centered on rice, livestock products, and fruits and vegetables.

Rice accounts for a quarter of gross agricultural income and is cultivated on about 50 percent of the agricultural land. Livestock production has expanded in recent decades in response to the demand for a more diversified diet. It now accounts for about 25 percent of gross farm income. Rapidly rising fish prices over the past several decades have accelerated the shift from fish to eggs, dairy products, and meats.

Agricultural Production

	1988/89	*1989/90*
	thous. metric tons	
Crop production[1]		
Barley	399	371
Mikan oranges	2,387	2,379
Raw sugar	929	984
Rice	9,041	9,416
Soybeans	277	272
Wheat	1,021	985

	1989	*1990*
	thous. head	
Livestock numbers		
Beef cattle	2,651	2,702
Dairy cattle	2,031	2,058
Hogs	11,866	11,816
Poultry		
Broilers	153,852	150,445
Layers	179,925	187,412

	1989	*1990*[2]
	thous. metric tons	
Animal product output		
Beef and veal	548	535
Butter	78	77
Cheese	27	27
Cow milk	8,059	8,100
Eggs[3]	40,383	40,250
Pork	1,594	1,595
Poultry meat	1,482	1,467

[1] *Marketing years are Oct.-Sept. for barley, mikan oranges, raw sugar, and soybeans; Nov.-Oct. for rice; and July-June for wheat.*
[2] *Estimated.*
[3] *Million eggs.*

Production highlights

Despite a decrease in planted area and a devastating typhoon at harvesttime, rice production in 1990 rose 4 percent above "normal."

Because of high support prices, rice production continues to exceed a declining consumption, resulting in chronically large stock levels.

Beef production is expected to rebound in 1991 from a slight decline in 1990, despite increased competition from imports as a result of the elimination of quotas on imported beef.

Farm and food policy

The Japanese Government treats agriculture as a special industry with a key role in the country's cultural and economic life. Government goals for agriculture throughout the 1980's included securing a stable food supply, maintaining the Japanese diet (characterized by high rice and fish consumption, low meat and fat intake, and relatively low total caloric consumption), realizing higher farm productivity, and protecting natural resources and the integrity of rural villages.

Measures taken to expand the country's food supply include administering high price supports through the use of strict border measures (which protect Japanese farmers from outside competition) and improving farm productivity through various Government land and rural development programs.

However, high administered rice prices, while they have encouraged production, have helped to discourage consumption and have caused surpluses. They have also led to three rice

Japan at a Glance

Population (1990): 124 million
Urban population: 72%
Population growth rate: 0.3%
Per capita gross national product (1989): $23,125
Total land area: 377,720 square kilometers; 14-15% agricultural, 8% paddy field, 6% upland field
Major crops: Rice, vegetables, fruits, sugar
Livestock sector: Fish/aquaculture, dairy, poultry, hogs, beef
Leading agricultural exports: Fish meal, confectionery products, pigskins, wheat flour, dried mushrooms, vegetable seeds
Leading agricultural imports: Logs, lumber, corn, beef, pork, fresh fruits, cotton, wood chips, soybeans, wheat
Agricultural imports as a share of total imports: 18%
U.S. share of total agricultural imports: 34%
Percent of labor force in agriculture: 7%
Membership in economic or trade organizations: GATT, OECD

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beef and veal	1,654	53
Corn	2,261	83
Cotton (raw)	1,251	42
Dairy products	672	4
Fresh fruits	1,385	45
Hide and skins	701	63
Logs	4,614	36
Lumber	3,063	30
Pork	1,646	17
Poultry products	964	23
Soybeans	1,348	75
Soybean meal	242	5
Sugar	667	2
Tobacco, unmfg.	446	67
Wheat	1,194	53
Wood chips	1,362	38
All agricultural products[2]	38,918	34

[1] *Values are shown in U.S. dollars at U.S.$1=137.26 yen.*
[2] *Includes products not listed.*

land diversion programs and two surplus disposal programs in the past 15 years.

Imports and exports

Japan is the world's largest net importer of farm products and the largest single-country agricultural market for the United States. Japan's agricultural exports are relatively small, consisting primarily of fishmeal, confectionery products, dried mushrooms, and wheat flour.

Japanese wheat imports in 1990 were estimated at 5.5 million tons, a slight decrease from 1989. The U.S. market share, usually maintained at a fairly constant level by the Government, was 56 percent. Because of exchange rate fluctuations, imports of processed wheat products dropped.

Imports of U.S. corn in 1990 were estimated at 14 million tons, or 88 percent of total corn imports. Competition in the Japanese corn import market will stiffen in 1991 with prospects for increased purchases from China.

Japanese soybean imports have trended downward in recent years to an estimated 4.3 million tons in 1990, because of the continuing substitution of rapeseed and large imports of Chinese soybean meal. U.S. soybeans still supply the bulk of the market but are losing market share to Brazilian imports because of price and quality factors. Considerable market opportunities exist for the United States in the area of food-use soybeans, which continue to show a steady growth in consumption.

Quotas on Japanese beef imports were lifted on April 1, 1991, in accordance with the terms of the 1988 U.S.-Japan Beef and Citrus Agreement. U.S. beef exports are expected to increase considerably over the long term as a result of the liberalization of the beef market. In 1990, U.S. beef and veal exports grew by 15 percent to over $1 billion.

Thailand surpassed the United States as the top poultry supplier to Japan in 1990, capturing a 37-percent market share. The United States was a close second with 35 percent but faces increasingly stiff competition from Thai and other Asian suppliers.

Japanese imports of fresh fruit in 1989 were up 13 percent from the previous year to about $1.4 billion (cost, insurance, and freight basis). Total 1989 imports included $502 million worth of citrus fruit and $883 million worth of noncitrus fruit.

The United States continues to supply virtually all of Japan's fresh orange, grapefruit, and lemon imports (98 percent of total 1989 imports). Bananas represent over half of Japan's noncitrus imports, and these are imported mainly from the Philippines.

Japan is by far the largest export market for U.S. logs and lumber. The import value in 1989 amounted to nearly $2.6 billion. Because of the declining supply of tropical logs from South Pacific countries in recent years, Japan is depending more on logs and other forest products from the United States. Japan has maintained a fairly high level of housing starts in recent years. Total housing starts in 1990 were estimated at 1.68 million units, including 740,000 wooden units.

Trade policy and prospects

Traditionally, agricultural trade policy has emphasized minimizing imports where possible and, where not possible, encouraging imports of raw materials.

Japan is under a great deal of pressure from its international trading partners to open its market to a wider variety of agricultural products. The Government has made some concessions along these lines.

The Government agreed in 1988 to improve market access for beef, citrus, and many high-value, processed agricultural products. It is funding efforts to improve the competitiveness of its domestic beef and citrus sectors and is studying the export market as a possible outlet for beef and high-quality fruits.

In addition, the Government is redoubling its commitment to biotechnology research to develop higher yielding, unique products that can compete more effectively.

With respect to the politically charged issue of liberalizing its rice market, the Government remains committed to the principle of self-sufficiency, although it has expressed nominal support for agricultural trade liberalization. ■

Kenya

K

Profile of agriculture

Agriculture is the centerpiece of Kenya's economy. It contributes nearly 30 percent of the gross domestic product, generates 65 percent of total export revenues, and provides employment for three-fourths of the work force.

The country, however, is extremely short of good agricultural land. Of a total land area of 57 million hectares, only 17 percent is judged to be of high-to-medium agricultural potential, while 75 percent is semiarid, and 8 percent is barren.

Kenyan agriculture consists largely of small-scale producing units—the average farm is estimated at no more than 2 hectares. These smallholders account for roughly half the corn harvest (the most important grain crop) and most of coffee and tea production (the country's key export commodities). Small-scale farming also plays a major role in the production of cotton, dry edible beans, pyrethrum, and a wide array of horticultural products.

On the livestock side, the most developed sector is the dairy industry, where smallholders produce about 75 percent of the nation's milk output. Kenya's beef industry is concentrated in marginal land areas where crop potential is limited. Although the poultry industry is growing, it faces shortages of quality feeds.

Agricultural Production

	1989/90	*1990/91*
	thous. metric tons	
Crop production[1]		
Coffee	104	96
Corn	2,836	2,630
Pineapple	212	189
Pyrethrum	9	1
Rice	24	24
Sisal	37	37
Sugar	441	440
Tea	181	193
Wheat	241	195

	1988
	thous. head
Livestock numbers	
Cattle	
Beef	10,000
Dairy	2,700
Hogs	85
Poultry[2]	6,000

[1] *Crop year is Oct.-Sept. for coffee; July-June for corn, rice, wheat, and pyrethrum, and calendar year for all others.*
[2] *Numbers are for large-scale enterprises. As many as 15 million birds are estimated to be in backyard production.*

Production highlights

Production levels for major cereal grains (corn and wheat) are expected to decline in 1990/91 because of poor growing conditions, which curtailed both the area harvested and yields. Rice output remains stagnant.

The coffee crop, traditionally the leading export earner, continues its downward spiral. The collapse of the International Coffee Organization in July 1989 was followed by a sharp decline in prices, which together with rising costs of production have severely reduced profits in the industry. As a result, many growers have neglected their estates.

The sugar industry is besieged by financial mismanagement and production problems in several factories. Although output is expected to be down only slightly in 1990/91, the single factory that produces highly refined white sugar for use in the food processing industry has not been operating. Kenya will thus be dependent on sugar imports in 1991.

Farm and food policy

The cornerstone of farm and food policy is the maintenance of price and marketing incentives to farmers. These are intended to stimulate a rate of growth in agricultural output that equals or exceeds the expansion in population. Farm prices for corn, wheat, rice, sugarcane, cotton, and milk are controlled to some extent by the Government and are revised each year.

The Government does not set farm price levels for cash crops grown primarily for export, such as coffee, tea,

Kenya at a Glance

Population (1990): 24.6 million
Urban population: 22%
Population growth rate: 3.6%
Per capita gross domestic product (1989): $355
Total land area: 571,000 square kilometers; 17% crops, 60% livestock production, 23% nonagricultural
Major crops: Corn, tea, coffee, wheat, sugarcane, beans, cotton, sisal, pyrethrum, rice
Livestock sector: Dairy cattle, beef cattle, poultry, goats, sheep
Leading agricultural exports: Tea, coffee, pineapples, other horticultural products
Leading agricultural imports: Vegetable oils, refined sugar, wheat, tallow, rice
Agricultural imports as a share of total imports: 6%
U.S. share of total agricultural imports: 8%
Percent of labor force in agriculture: 75%
Membership in economic or trade organizations: GATT, Lomé Convention, Preferential Trade Area

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cocoa	1.9	0
Essential oils	4.1	12
Palm oil	59.4	0
Plants and shrubs	0.9	11
Rice	2.92	4
Seeds, fruits, and vegetables	0.3	33
Soybean oil	0.5	100
Sugar, refined	19.3	0
Tallow and animal fats	5.4	0
Wheat	21.1	38
Wine	2.1	0
All agricultural products[2]	130.1	8

[1] *Values are shown in U.S. dollars at U.S.$1=21.6 Kenyan shillings.*
[2] *Includes products not listed. Excludes forest products.*

pineapple, sisal, or pyrethrum. Growers and exporters receive world market prices, after deducting marketing costs and taxes. The 1989 budget abolished export taxes on coffee and tea. In its place, the budget introduced a 5-percent presumptive tax on the market value of all agricultural commodities.

The Government sets maximum consumer prices for items such as wheat flour, cornmeal, vegetable oils, milk, bread, sugar, and tea. Retail prices for such items are carefully maintained at affordable levels to ensure urban tranquility.

Retail and wholesale prices for beef were decontrolled in 1989. This change improved producer margins and spurred production. The increase in beef prices has not reduced consumer demand for red meat, as beef is still less expensive than poultry meat and pork products.

The Government recently instituted an agricultural adjustment program to liberalize the marketing system, a measure encouraged by international donors who have tied financial aid to Kenya's progress in relaxing Government control over agriculture. Plans call for a reduced role for officially sanctioned marketing boards in the distribution of agricultural commodities, along with an expanded role for cooperatives and private traders.

Imports and exports

Kenya is a net agricultural exporter, with sales of $554 million in 1989 versus imports of $130 million.

Agricultural exports account for as much as 65 percent of total export earnings.

Coffee export prices have remained depressed, which has allowed tea to overtake coffee as the leading agricultural foreign exchange earner in 1989. Horticultural products, led by pineapples and cut flowers, placed a strong third after tea and coffee.

Despite the sharp drop in the value of coffee exports, the total value of agricultural exports in 1989 rose from a year earlier because of higher prices for most other export commodities.

The U.S. market takes 5 percent of the total value of Kenya's exports and 8 percent of agricultural exports.

Major agricultural imports in 1989 were vegetable oils, wheat, refined sugar, tallow, and rice.

Imports of vegetable oil in recent years have ranged between 120,000 and 150,000 tons. In the near future, Kenya will continue to rely on imports of vegetable oil to cover its deficit production. Most imported vegetable oil is palm oil supplied by Malaysia and destined for use by Kenya's edible oil and soap industries.

Wheat imports in 1988 and 1989 were valued at $10.8 and $21.1 million, respectively. A significant share of the country's wheat imports are met by concessional sales from the United States. Saudi Arabia has been the largest commercial supplier of wheat in recent years.

U.S. agricultural exports to Kenya declined from $14 million in 1988 to $10.7 million in 1989. U.S. imports of Kenyan agricultural products in 1989 were valued at nearly $49 million, up from $48 million in 1988.

Best prospects for U.S. exporters in the agricultural sector include wheat; limited quantities of processed, high-value foods; vegetable oils; tallow and animal fat; livestock breeding material; seeds; and a variety of specialty goods.

A major duty-free complex opened in late 1990 in the Nairobi airport. Among other products, this complex offers packaged foods for sale to the diplomatic community in Nairobi and to air passengers in transit. The airport facility, together with the duty-free facility planned for the Mombasa airport, should help spur a significant increase in exports of U.S. high-value food items.

Trade policy and prospects

Kenya is experiencing an acute shortage of foreign exchange and a severe balance-of-payments problem that limit its capacity to import both essential and nonessential commodities.

A policy initiative to decrease the country's dependence on wheat imports was implemented in early 1989, but this policy is being relaxed. Several private importers were issued import licenses in the latter part of 1990.

The Government is making progress in liberalizing its import licensing and tariff structures. Official trade policy focuses on discouraging imports of processed foods to protect local industries and to conserve the country's limited supply of foreign exchange. ■

Korea

K

Profile of agriculture

South Korea's agricultural sector is characterized by small, owner-operated farms averaging 1.2 hectares. Rice is the predominant crop, although increased consumer demand is stimulating production of livestock products, vegetables, and, to a lesser degree, fruits.

Agriculture contributes about 10 percent to the gross national product and employs about 16 percent of the labor force.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production[1]		
Apples	676	629
Barley	516	416
Chinese cabbage	2,694	3,049
Green onions	558	407
Radishes	1,756	1,755
Rice	5,898	5,606
Sweet potatoes	592	432
	thous. head	
Livestock numbers[2]		
Cattle		
Beef	1,573	1,562
Dairy	497	495
Hogs	5,372	4,251
Poultry[3]		
Broilers	22	27
Layers	39	40
	thous. metric tons	
Animal product output		
Beef[4]	124	123
Butter[5]	6,870	7,400
Cheese[5]	4,768	6,700
Chicken	155	162
Eggs[6]	577	583
Milk	1,762	1,789
Pork	485	440

[1] *Calendar year basis.*
[2] *Based on estimates in June of each year.*
[3] *Millions.*
[4] *Carcass weight basis.*
[5] *Metric tons.*
[6] *Million dozen.*

Production highlights

Despite less-than-optimal growing conditions, another bumper rice crop of over 5.6 million metric tons was harvested in 1990. Government procurement prices were raised 5 to 10 percent, reaching the equivalent of $1.95 per kilogram for the best quality rice.

The hog sector underwent serious adjustment in 1990. Increased prices and new Government restrictions on production led to high slaughter rates in late 1989 and early 1990, reducing sow numbers by 23 percent. Low sow numbers throughout the year led to a sharp decline in production, and hog numbers remained low as of early 1991. In contrast, broiler production increased rapidly in 1990.

Compound feed output totaled an estimated 10.4 million tons in 1990, roughly equal to 1989 output. Feed output for hogs declined by 14 percent, but output for poultry rose by 12 percent, and output for beef and dairy cattle rose 5 to 6 percent each.

Production declined for most vegetables other than Chinese cabbage. Heavy rains in late summer and early fall delayed crop development and hindered harvesting.

Farm and food policy

The South Korean Government has long been heavily involved in domestic agricultural markets. Because of the dominance of rice and barley as food staples, policies pertaining to food grains are central to both food and farm policy. The Government is authorized to buy enough grain from farmers each year so that it can stabilize both farm and retail prices through control of grain distribution and manipulation of Government stocks.

South Korea at a Glance

Population (1990): 42.8 million
Urban population (1989): 84%
Population growth rate: 1.0%
Per capita income (1990 est.): $5,477
Total land area: 99,263 square kilometers; 21% agricultural
Major crops: Rice, vegetables, fruit
Livestock sector: Hogs, beef, poultry
Leading agricultural exports: Leather, refined sugar, ginseng products, chestnuts, leaf tobacco
Leading agricultural imports: Hides and skins, corn, cotton, leather, wheat, sugar, wool, beef, soybeans
Agricultural imports as a share of total imports: 11%
U.S. share of total agricultural imports: 47%
Percent of labor force in agriculture: 16%
Membership in economic or trade organizations: GATT, UNCTAD

On the food side, Government production policies and inefficient and restrictive marketing and import systems combine to make urban Korean consumer food prices among the highest in the world in terms of the share of income spent on food.

The goals for Korea's farm and food policies for the next 5 years are to increase agricultural efficiency and rural income. The focus is on the need to narrow the gap between rural and urban incomes by restructuring the agricultural sector and increasing off-farm income.

Value of Agricultural Imports, 1990[1]

	Total imports	*U.S. share*
	$ mil.[2]	*%*
Selected products		
Beef	280	36
Corn	856	89
Cotton	803	65
Fur and furskins	179	19
Hides and skins	1,205	71
Leather	629	13
Soybeans	251	80
Soybean meal	94	0
Sugar	364	0
Wheat	407	79
Wool	352	1
All agricultural products[3]	6,866	47

[1] Estimates based on Korean Government trade data for the first 10 months of 1990 (cost and freight basis).
[2] Values are shown in U.S. dollars at U.S.$1=713.10 won.
[3] Includes products not listed; excludes forest and marine products.

Methods of accomplishing these goals include promoting farm mechanization, developing food-processing industries, and relaxing regulations on the use of farmland to increase farm size and encourage alternative uses of farmland. In addition, the Government is working on a 10-year farm area development plan, which gives priority to providing or improving medical facilities, roads, water supplies, and sewage systems in rural areas.

Imports and exports

South Korea is a net agricultural importer with purchases at a record-high $6.87 billion in 1990 versus exports of $1.3 billion. The U.S. share of Korea's agricultural import market has remained steady for several years at 47 percent. Korea's agricultural imports are dominated by bulk raw materials for industrial use and animal feed.

Changes in the value of most major agricultural imports from 1989 to 1990 reflected changes in commodity prices more than import quantities. Korean imports of hides and skins, the most valuable import items, rose 14 percent to $1.2 billion, while import volume was virtually the same as in 1989. Imports of soybeans declined 24 percent in value but only 7 percent in quantity.

The most significant change in Korea's agricultural import pattern in 1990 was the result of a major shift in the world feed grain market after the fall harvest in the Northern Hemisphere. Late in the year, price-conscious buyers opted for cheap feed wheat from the European Community and other sources and corn from China, which was priced several dollars below U.S. corn. This pattern continued into early 1991.

Milling wheat imports declined about 8 percent from 1988 to 1989, but remained stable the following year. Consumption of raw flour for home use increased dramatically in 1989 to account for 7.5 percent of total wheat flour consumption. Restaurants also used more flour, but consumption decreased for use in noodles, bakery and confectionery products, soy sauce, and makkoli, a traditional fermented beverage.

Korea resumed beef imports in August 1988. On a carcass weight basis, imports totaled 83,000 metric tons in 1989 and 117,000 metric tons in 1990; their value increased from $218 million in 1989 to about $280 million in 1990. The U.S. share grew from 27 to 36 percent on a value basis.

In direct response to the lifting of restrictive import regulations on a number of agricultural products in 1989 and 1990, imports of many of these products grew tremendously from the low preliberalization levels.

Imports of sausages, including hot dogs, and peanut butter from the United States each grew from preliberalization levels of about $5,000 to over $2 million in 1990. Jam imports, of which about 45 percent are supplied by the United States, grew from $327,000 to $2.7 million from 1988 to 1990.

Korea's agricultural exports increased 21 percent in value to $1.2 billion (free on board basis) in 1989 and a further 7 percent to $1.3 billion in 1990. Exports of finished leather rose over 150 percent from $119 million in 1988 to $299 million in 1990. During the same period, refined sugar exports rose 71 percent to $125 million and pine mushroom exports increased 23 percent to $58 million.

Exports of leaf tobacco declined in 1989 but rebounded in 1990 to $83 million. Pork exports reached a record $56 million in 1989 but dropped to $32 million in 1990 because of high domestic prices and a decline in hog stocks. Other major export items in 1990 included chestnuts at $89 million and ginseng products at $127 million.

Trade policy and prospects

The Government of South Korea protects its domestic agriculture through trade-restrictive measures such as tariffs, quotas, and other import barriers. The Government announced in 1990 that, in exchange for elimination of the defense tax on imports, its 5-year tariff reduction plan would be postponed for 1 year.

Even after the reduction plan has been implemented, many items important to the United States will continue to face high tariffs. In addition, many agricultural products remain on the import-restricted list, and many others are subject to plant quarantine and food safety restrictions. ■

Malaysia

M

Profile of agriculture

Although rapid expansion in manufacturing and services has reduced agriculture's once dominant role in the Malaysian economy, agriculture still accounts for more than 19 percent of the gross domestic product and about one-third of total exports. Agriculture also is the country's largest employer, providing jobs for about 28 percent of the working population.

Malaysian agriculture encompasses several distinct subsectors. The first consists of relatively large, efficient estates that concentrate on export-oriented tree crops such as palm oil, rubber, and cocoa. The second subsector is made up of small-scale farm operations primarily engaged in producing basic food crops such as rice, fruits, vegetables, and livestock.

A third subsector is composed of large numbers of small holders organized under the management of several public development agencies. In general, this group concentrates on export-oriented plantation crops.

Principal agricultural production includes wood products, palm oil, rubber, livestock, and cocoa. Other major commodities are rice, coconut, pineapple, sugar, and tropical fruit. Aquaculture production currently is small, but the industry is expanding rapidly.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production[1]		
Bananas[2]	500	505
Cassavas[2]	400	410
Cocoa beans	225	240
Coconut oil	47	52
Palm oil	5,636	6,412
Palm kernel oil	702	850
Pepper	25	26
Pineapple	206	211
Rice, milled	1,125	1,160
Rubber	1,419	1,290
Sugar, raw	100	105
Tobacco	14	11

	1988	*1989*[3]
	thous. head	
Livestock numbers[2,4]		
Buffalo	140	135
Cattle	543	607
Goats	277	283
Hogs	1,624	1,888
Poultry		
Broilers	2,243	1,916
Layers	237	256
Sheep	146	181

[1] *Calendar year, except Oct.-Sept. for cocoa, palm oil, and palm kernel oil.*
[2] *Peninsular Malaysia only.*
[3] *Estimated.*
[4] *Estimates as of December 31 each year.*

Production highlights

Growth in the agricultural sector during 1990 was estimated at only 3.7 percent versus 5.8 percent in 1989. The slowdown was largely the result of a continued decline in the production of rubber and only marginal growth in output and lower prices for sawlogs. Moderate production increases for palm oil and cocoa also were countered by lower prices.

Malaysia's total wood production expanded marginally to an estimated 42 million cubic meters in 1990. However, slack demand during the latter part of 1990, because of weakening economies in some countries and shipping disruptions caused by the situation in the Middle East, forced log and lumber prices to decline.

Palm oil production increased by 14 percent to 6.4 million tons in 1989/90. The strong growth was due to good weather, adequate fertilizer use, and more oil palm trees coming into production. Malaysia remains the largest palm oil producer in the world and accounts for nearly 30 percent of the world's total vegetable oil trade.

Malaysia at a Glance

Population (1990): 17.8 million
Urban population: 37%
Population growth rate: 2.4%
Per capita income (1989): $2,059
Total land area: 329,758 square kilometers; 60% forest, 14% tree crops, 2% field crops
Major crops: Palm oil, rubber, cocoa, rice, sugar, pineapples
Livestock sector: Poultry, hogs, beef cattle, some dairy cattle, aquaculture
Leading agricultural exports: Forest products, palm oil, rubber, palm kernel oil, cocoa, pineapples
Leading agricultural imports: Fruits and vegetables, corn, sugar, dairy products, fish, wheat, rice, cotton, soybeans
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: 7%
Percent of labor force in agriculture: 28%
Membership in economic or trade organizations: ANRPC, ASEAN, Cairns, Commonwealth, GATT, IBRD

Cocoa bean output increased by 7 percent to 240,000 tons in 1989/90 as additional cocoa trees came into production for the first time. Although low prices continue to constrain export revenues, cocoa remains the third most important agricultural export crop after palm oil and rubber. Malaysia is the world's fourth largest producer of

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animals, live	20.5	12
Apples	15.2	41
Coffee	15.8	6
Corn	220.2	2
Cotton[2]	113.5	12
Dairy products and eggs	208.3	1
Fish and fish products	144.8	3
Meat and meat products	78.4	5
Oranges	21.9	52
Rice, milled	124.7	0
Soybean meal	39.5	0
Soybeans	111.9	15
Sugar and preparations	208.9	[3]
Tobacco and products	44.7	79
Vegetable oil	93.7	4
Wheat	132.2	5
All agricultural products[4]	2,258.2	7

[1] *Values are shown in U.S. dollars at U.S.$1=2.70 ringgits.*
[2] *Includes other natural fibers.*
[3] *Less than 0.5 percent.*
[4] *Includes forest products and other products not listed.*

cocoa beans after Côte d'Ivoire, Brazil, and Ghana.

Rice production is estimated to have increased marginally to 1.2 million tons (milled) in 1990. Despite heavy Government support, domestic rice output has stagnated in recent years, falling well short of demand and forcing relatively large imports. Inefficient farm size and more attractive off-farm employment opportunities have contributed to the decline.

The livestock sector expanded by an estimated 7 percent in 1990 as domestic and export demand for pork and poultry meat continued to expand. Although Malaysia is a net exporter of both poultry products and pork, over 60 percent of domestic beef and about 95 percent of dairy product consumption needs must be met by imports.

Farm and food policy

Agricultural policy emphasizes the improvement of income through efficient use of the country's resources and the revitalization of the sector's contribution to overall economic development. In line with this policy, the 1991 budget allocated about $600 million specifically to agriculture and rural development, 42 percent of which was earmarked for land development.

In addition to land development plans, the Malaysian Government also intervenes heavily in the domestic rice and tobacco sectors. The Government provides infrastructure support in the form of irrigation, as well as production subsidies and minimum price supports. Because domestic production costs for rice and tobacco are relatively high, imports are strictly controlled.

Further, hoping to tap lucrative export markets and reduce import dependence as much as possible, the Government provides incentives for the expansion of various other agricultural industries. Among the targeted industries are fruits and vegetables, fishery, dairy, and small ruminant (goats, sheep) production.

Imports and exports

Thanks to continued strong exports of forest products and palm oil and related products, Malaysia had a positive agricultural trade balance of $6.1 billion in 1989. The important contribution of agriculture to Malaysian's total merchandise trade balance of $2.6 billion is obvious. However, strong import demand is starting to erode this margin.

Total agricultural exports increased by only 1 percent to $8.3 billion in 1989. The slowdown was largely the result of sharply lower export revenues for rubber and cocoa, which masked a strong increase in wood product exports and a moderate gain in shipments of vegetable oils.

Despite Government efforts to increase domestic output, agricultural imports surged by about 16 percent in 1989. This increase reflected the overall strength of the economy and growing consumer demand for imports. However, imports from the United States fell by about 9 percent during the same period, largely because of a sharp drop in imports of U.S. corn.

The largest import category in 1989 was cereals, stimulated by the steadily growing demand for corn to supply the expanding livestock industry.

Other important import items were fruits and vegetables, raw sugar, and dairy products. Major imports from the United States included fruits and vegetables, tobacco, soybeans, and cotton.

Trade policy and prospects

Malaysian import duties on many agricultural products are quite high, averaging 30 to 50 percent ad valorem. Among the products facing high duties are fresh and canned fruits, tobacco, wine, and processed products such as snack foods and breakfast cereals.

There are relatively few nontariff barriers, one notable exception being a ban on imports of chicken meat. Despite these trade barriers, prospects for increased imports of many agricultural products are good.

As a member of the Cairns Group, Malaysia has supported meaningful reform in world agriculture in the Uruguay Round of Multilateral Trade Negotiations. ■

Mexico

Mexico at a Glance

Population (1990): 87.9 million
Urban population: 51%
Population growth rate: 2.1%
Per capita income (1990): $2,879
Total land area: 1,923,040 square kilometers; 12% arable, 1% permanent crops, 39% meadows and pastures, 24% forest and woodland
Major crops: Corn, beans, winter vegetables, oilseeds, feed grains, cotton, coffee, sugarcane, fruit
Livestock sector: Cattle, hogs, poultry, goats
Leading agricultural exports: Winter vegetables, cattle, coffee, cotton
Leading agricultural imports: Dry beans, oilseeds, corn, feed grains, horticultural seeds, sorghum, wheat, pork, offals, tallow
Agricultural imports as a share of total imports: 12%
U.S. share of total agricultural imports: 75%
Percent of labor force in agriculture: 26%
Membership in economic or trade organizations: GATT, IBRD, IDB, OAS

Profile of agriculture

The agricultural sector accounts for 9 percent of Mexico's gross national product (GNP). Although the proportion of GNP generated by agriculture has declined as the industrial and service sectors have grown, about a third of the population still lives and works in rural, largely agricultural areas.

Wheat, sorghum, oilseeds, vegetables, cotton, and forage crops are produced on large, irrigated farms in the arid north. Small, nonirrigated farms in central Mexico concentrate on staples such as corn and beans. There is some diversification toward feed grains, oilseeds, and fruits and vegetables, particularly near Mexico City.

The tropical regions of southern Mexico produce coffee, rice, sugarcane, and traditional plantation crops.

Cattle operations are concentrated in the northern and gulf states, where livestock is largely range-fed. Pork and poultry operations are decentralized, and production is more intensive in modern, commercial operations.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Cocoa	38	40
Coffee	37	38
Corn	9,750	12,000
Dry beans	605	1,300
Honey	49	50
Oranges	2,200	2,400
Tomatoes	1,640	1,800
Wheat	4,000	3,900
	mil. head	
Livestock numbers		
Cattle	30.0	29.0
Beef	27.9	26.9
Dairy	2.1	2.1
Hogs	8.6	8.6
	thous. metric tons	
Animal product output		
Poultry meat	745	780
Turkey meat	15	17

Production highlights

Mexico's total crop production increased in 1990, primarily because of abundant rains; however, it has decreased in recent years. Drought, frosts, hurricanes, low reservoir levels, tight credit, and high production and input costs all have contributed to the decline.

In 1990, corn, safflower, and sorghum production increased, while cottonseed, rice, and soybean output declined from 1989 levels. Overall grain production increased a modest 2 percent, while oilseed output decreased almost 40 percent as a result of price policy changes.

Beef cattle numbers fell about 3 percent, despite good forage and feed supplies and price policy adjustments announced in October 1989 that favored beef production. Cattle numbers decreased in particular because of policies that encouraged feeder cattle exports to the United States.

Hog numbers quickly rebounded to normal levels in 1990 after the swine cholera outbreak of early 1989 and despite strong competition from U.S. pork exports. Mexico's poultry industry is increasingly efficient and competitive but still lags behind the U.S. poultry industry.

Farm and food policy

The Mexican Government has been involved in all aspects of the country's food system since the 1930's. Like many developing countries, for many years Mexico tried to grow and industrialize through import substitution rather than export promotion. The country imposed formidable tariff and nontrade barriers on imports. It feared foreign domination of its economy, so it restricted direct investment and foreign ownership of assets. The Government controlled the *peso* exchange rate, restricted access to foreign exchange, assumed direct control of more than 1,000 business enterprises, and established complex regulations for businesses it did not control.

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Grains, pulses, oilseeds		
Corn	369	95
Dry beans	175	95
Oilseed, except soy/cotton	108	70
Sorghum	273	93
Soybeans	210	70
Wheat	36	70
Livestock and products		
Cattle	50	80
Hides/skins, tanned	60	80
Meats, fresh chilled	204	95
Nonfat dry milk	435	10
Other fats, oils	209	90
Tallow	52	80
Processed foods and beverages	300	70
Sugar	220	70
All agricultural products[2]	2,130	75

[1] *Values are shown in U.S. dollars at U.S.$1=2,801 pesos (controlled rate).*
[2] *Includes products not listed.*

Since 1985, however, there has been almost a 180-degree shift in Mexican economic policy, largely because the old policy had brought the country to the brink of insolvency.

Faced with the second largest debt of any Latin American nation, the Mexican Government has cut producer and processor subsidies, trimmed programs to aid agriculture, and focused its resources on agricultural enterprises in which it has a comparative advantage—exporting whenever possible and importing whenever necessary.

The new strategy transfers much of the control over the economy to the private sector. The goal is to develop a competitive economy that can sell in the world marketplace so that it can, in turn, afford to import what it needs.

In line with this strategy, the Government is selling off state-owned companies to private owners, opening the economy as rapidly as possible by encouraging foreign investment and promoting nonoil exports, reforming import policies, and reducing Government outlays as a proportion of the gross domestic product.

Imports and exports

Mexico is a net importer of agricultural products, with purchases totaling $3.7 billion in 1989 versus sales of $2.5 billion. The chief agricultural imports are grains, and the major exports are coffee and cotton.

Agricultural trade between the United States and Mexico totals about $5 billion a year. That figure represents an average annual gain of 3.6 percent during the 1980's, which is one of the highest growth rates for any major U.S. trading partner.

Mexico is the third largest single-country market for U.S. agricultural exports and the second largest supplier of these items.

In turn, the United States buys more than 90 percent of Mexico's agricultural exports and supplies 75 percent of Mexico's agricultural imports.

The nature of U.S.-Mexico trade has been largely complementary. The United States has exported bulk commodities such as corn and soybeans, and Mexico has supplied tropical products (such as coffee), fruits, and vegetables. In recent years, Mexico has also become an important supplier of processed foods, including tomato sauce and paste, fruit juice, and beer.

During 1990, both Mexico and the United States experienced problems that caused sizable increases in their agricultural imports from each other.

Mexico was forced, after very poor crops in 1989, to import relatively large quantities of corn, dry edible beans, and sorghum. This is not likely to be the case in 1991. However, imports of meat, soybeans, and rice probably will increase. The overall net effect likely will be that the total value of agricultural imports by Mexico in 1991 will be about the same or slightly less than in 1990.

On the U.S. side, a freeze in December 1989 severely limited U.S. production of winter vegetables, and imports from Mexico filled the void. Tomatoes were the single largest agricultural export earner for Mexico in 1990. In 1991, although tomato exports to the United States are likely to decline, the trend toward larger sales of horticultural products probably will continue.

Trade policy and prospects

Mexico joined the General Agreement on Tariffs and Trade (GATT) in 1986 and agreed to a ceiling of 50 percent on tariffs. In actual practice, the highest tariff rate currently applied is 20 percent, and the average tariff is lower—11 percent on a trade-weighted basis.

In addition, Mexico has cut its import licensing requirements by more than half. Import licensing has been the main way that Mexico has restricted imports in the past. However, nonautomatic licenses are still required for many farm products, such as poultry, apples, peaches, grapes, tobacco, wheat, corn and dry beans, to name just a few. A "Buy Mexico" policy is in effect before import licenses are issued.

Mexico is one of the participants in negotiations on a North American free trade agreement, along with the United States and Canada. An agreement among the three countries would create a market of 365 million people with a combined GNP of more than $6 trillion. ■

Morocco

M

Profile of agriculture

The agricultural sector is a major contributor to Morocco's economy. It accounts for nearly 20 percent of the gross domestic product, 40 percent of employment, and about 30 percent of export earnings.

Agricultural development and improved self-sufficiency in producing important commodities such as cereals, vegetable oils, and sugar are national priorities. The structure of land ownership presents a major obstacle for intensive agricultural development: the average farm size is less than 5 hectares.

Morocco's arable land, estimated at 8.6 million hectares, is largely devoted to cereals, particularly wheat and barley, pulses, citrus, and olives. Only one-tenth of the agricultural land is irrigated; thus, the year-to-year variability of output is closely related to rainfall. The lack of it has a profound effect on economic growth.

Large livestock operations are the exception rather than the rule in Morocco. Most dairy cattle are dual purpose (milk and meat), and specialized beef operations are rather scarce. Sheep production is extensive and, because it relies heavily on pasture, results in serious overgrazing.

Agricultural Production

	1988/89	*1989/90*[1]
	thous. metric tons	
Crop production[2]		
Barley	2,999	2,138
Corn	403	436
Citrus	1,444	1,050
Olives	347	600
Pulses	347	337
Sugar beets	2,990	3,000
Sugarcane	1,094	1,020
Sunflowerseed	96	160
Vegetables	3,325	NA
Wheat	3,927	3,614
	1989	*1990*
	thous. head	
Livestock numbers[3]		
Dairy and beef cattle	3,137	3,500
Goats	5,030	5,100
Sheep	12,733	13,800

[1] *Estimated.*
[2] *Crop years are Sept.-Aug.*
[3] *Census carried out during Oct.-Nov.*

Production highlights

During 1990, grain production was down about 20 percent from 1989, mostly because of inadequate rainfall in the central and southern regions. Barley production was down the most, nearly 30 percent, and wheat was off 8 percent.

During the 1989/90 season, total citrus production was down nearly 25 percent following the bumper 1988/89 harvest. Production of early fruit, clementines, and navel oranges was lower in regions that experienced exceptionally high production the year before.

Olive production in 1989 reached a record level of 600,000 metric tons, about 75 percent more than in 1988. As a result, Morocco exported about 30,000 metric tons of olive oil during 1990 in addition to olives, which are normally exported each year. However, production of olives was down in 1990 by more than 33 percent. The alternate bearing nature of olive trees and dry weather during blossoming and fruit set accounted for the drop in production.

The area devoted to sunflowers has increased sharply in recent years, reaching 160,000 hectares in 1990 compared with 112,000 in 1989. There were correspondent increases in sunflowerseed production.

Morocco at a Glance

Population (1989): 24.6 million
Urban population: 55%
Population growth rate: 2.5%
Per capita income (1989): $930
Total land area: 445,000 square kilometers, excluding Western Sahara; 19.5% arable land
Major crops: Wheat, barley, pulses, citrus, olives, vegetables
Livestock sector: Sheep, goats, dairy, cattle, and some poultry
Leading agricultural exports: Fish and fish products, citrus, fresh vegetables, processed fruit and vegetables
Leading agricultural imports: Wheat, wood, edible oil, corn, tea, sugar, coffee, cotton, dairy products
Agricultural imports as share of total imports: 18%
U.S. share of total agricultural imports: 25%
Percent of labor force in agriculture: 40%
Membership in economic or trade organizations: GATT, Union of the Arab Maghreb

Farm and food policy

A key policy objective is to improve self-sufficiency for staple agricultural commodities. The main incentive for producers continues to be high price supports set by the Ministry of Agriculture. Currently, price supports are provided to promote basic crops such as soft wheat, sunflowerseed, rapeseed, sugar beets, and sugarcane.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Coffee and tea	98	0
Cotton	50	10
Dairy products	60	0
Feed grains	10	98
Forest products	145	[2]
Planting seeds	20	3
Soybeans	7	100
Sugar	79	0
Tallow	7	76
Tobacco and products	54	64
Vegetable oil	97	45
Wheat	214	65
All agricultural products[3]	996	25

[1] *Values are shown in U.S. dollars at U.S.$1=8.488 dirhams.*
[2] *Less than 0.5%.*
[3] *Includes products not listed.*

The Government also assists agricultural producers with irrigation investments, production credits, and some subsidization of inputs such as seeds. To encourage investment in agriculture, farmers are exempted from taxes until the year 2000.

Although domestic food subsidy programs have been reduced in recent years, the level of Government expenditures for these subsidies is still significant. Because retail prices for flour, vegetable oils, and sugar are fixed at artificially low levels, the Government is deeply involved in marketing these important staples.

Local food retailing takes place mainly in three forms: (1) central markets in urban centers and open-air markets in small towns, (2) many small "mom and pop" groceries spread throughout the towns and cities, offering mostly domestic products, and (3) a small but growing number of supermarkets in major cities, which regularly handle some imported processed foods.

The Moroccan marketing sector has a wholesale system, but it is not well developed, thus increasing the cost of food distribution. Many of the small establishments purchase in small quantities from high-priced distributors.

Imports and exports

Although agricultural production has improved considerably in recent years, Morocco is still a significant importer of agricultural products, purchasing nearly $1 billion worth in 1989. The country imports bulk commodities such as grains, forest products, crude vegetable oils, and cotton, although hides and skins, industrial tallow, and plant and animal genetic materials are becoming more important.

Imports of consumer-ready, high-value items are limited, but the potential for growth exists.

The United States accounted for nearly 25 percent of the value of Morocco's agricultural imports in 1989. Wheat and edible vegetable oil accounted for nearly 74 percent of total U.S. exports to Morocco.

Agricultural exports totaled $1 billion in 1989, with nearly 90 percent going to the European Community, particularly France. The principal products were fresh and processed fish, processed fruits and vegetables, fresh citrus, fresh vegetables, cotton, and pulses. These sectors operate in a free-market environment. Export revenues in 1990 were expected to be up significantly for fish and fish products and fresh vegetables.

Trade policy and prospects

Since 1983, Morocco has been engaged in a program of economic stabilization and reform in close cooperation with the International Monetary Fund and the World Bank. In 1987, Morocco joined the GATT, thus indicating its readiness to undertake further trade liberalization measures.

Morocco has liberalized its international trade by no longer requiring import licenses for many items and eliminating outright bans. Annual reductions in the list of products that require licenses are currently made by the Government in consultation with representatives of affected industries.

Licenses are currently required to import livestock, most fresh and processed fruits and vegetables, pulses, plant and animal genetic material, and many processed food products.

Although many basic commodities do not require import licenses, purchases are made through Government channels or state-owned enterprises. State trading is still prevalent for politically sensitive items such as wheat, feed grains, vegetable oils, tobacco, and sugar.

In 1989, over 93 percent of agricultural imports from the United States required a license or were purchased through Government channels or state-owned monopolies. In addition, some imported bulk commodities, such as corn used for feed, wheat, barley, and protein meals, were subject to a variable levy that protected domestic production and generated Government revenues.

Prospects for expanding Morocco's imports are limited by the country's status as a heavily indebted lower-middle-income country. ■

Netherlands

N

Profile of agriculture

After its water—which makes the Netherlands a major transportation center—fertile soil may be its next most important natural resource. Historically, agriculture has been so important to the Netherlands that the Dutch have devoted centuries to transforming the sea bed into farmland through an elaborate system of pumps, dikes, and polders.

The Netherlands is approximately half the size of New Jersey, and 30 percent of its 33,940 square kilometers of land area lies below sea level. Most of these lowlands are in agricultural use, and the area of reclamation continues to grow.

Dutch agriculture can be classified into four scales of production: large farms, small farms, glasshouse horticulture, and market gardens. The last group is not represented in official statistics, but large gardens traditionally have been important to the domestic vegetable market during the growing season.

Large and small family farms generally are as efficient as their U.S. counterparts, producing sugar beets, milk and dairy products, meat, grain, and potatoes. Commercial flower bulbs and flowers are also grown on a large scale and shipped around the world.

Glasshouse or greenhouse horticulture constitutes a major agricultural sector. It allows the year-round cultivation of food and flower products despite the cool marine climate and frequent storms. The Netherlands has approximately 9,200 hectares of greenhouse production capacity, and grows vegetables, potted plants, mushrooms, and flowers. Fresh-cut Dutch flowers are sold daily throughout the world.

Dutch agriculture accounts for approximately 4.4 percent of the country's gross domestic product and employs 4.2 percent of the work force.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production[1]		
Coarse grains	316	282
Corn for silage	2,686	2,363
Potatoes	6,856	7,036
Sugar beets	7,679	8,623
Wheat	1,047	1,076
	thous. head	
Livestock numbers[2]		
Cattle	4,772	4,926
Dairy cattle and calves	1,913	1,878
Hogs	13,729	13,915
Horses and ponies	67	70
Poultry		
Chickens	90,000	93,000
Ducks and turkeys	1,642	2,138
Other	402	550
Sheep	1,404	1,702
	thous. metric tons	
Animal product output		
Beef and veal	485	540
Butter	178	175
Cheese	568	595
Eggs[3]	10,660	10,790
Milk		
Cow	11,321	11,150
Other	33	30
Mutton/goat meat	13	14
Pork	1,636	1,672
Poultry meat	491	515

[1] *Crop years are July-June.*
[2] *Estimates are as of May each year.*
[3] *Million dozen.*

Netherlands at a Glance

Population (1990): 15 million
Urban population: 50%
Population growth rate: 0.8%
Per capita gross national product (1990): $17,796
Total land area: 33,940 square kilometers; 59% cultivated, 9% woodland, 32% other
Major crops: Cut flowers, flower bulbs, potatoes, sugar beets
Livestock sector: Beef, dairy products, eggs, pork, poultry
Leading agricultural exports: Cut flowers, dairy products, flower bulbs, pork and poultry, vegetables, potatoes
Leading agricultural imports: Animal feeds (brewers' grains, citrus pulp, and corn gluten), oilseeds, dairy products, wood products
Agricultural imports as a share of total imports (1990): 15%
U.S. share of total agricultural imports: 8%
Percent of population in agriculture: 4%
Membership in economic or trade organizations: EC, Benelux, GATT, IBRD, OECD

Production highlights

Agricultural performance in the Netherlands was good in 1990, with growing conditions much better than in other countries in Western Europe.

Horticultural production boomed. The dry summer in Western Europe proved favorable for Dutch fresh produce exporters, and demand rose. This demand is important, as production continues to expand. Currently 60 percent of Dutch fresh produce is exported.

Livestock and meat production increased nearly 3 percent, and output of poultry meat and eggs also rose.

In contrast, milk and butter production both declined slightly in 1990.

Value of Agricultural Imports January-September 1990[1]

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal feed	884	29
Fruits and vegetables	1,903	6
Grains and products	1,271	2
Meat, incl. poultry	884	2
Milk and products	1,504	[3]
Oilseeds and products	1,536	27
All other	5,134	4
All agricultural products[2]	13,600	8

[1] *Values are shown in U.S. dollars at U.S.$1=1.8 guilders.*
[2] *Includes wood products.*
[3] *Negligible.*

Low European Community (EC) butter prices, pushed down by rising exports from East European sources, resulted in a major increase in EC intervention stocks.

Farm and food policy

The Netherlands was a founding member of the EC in 1958 and has remained an ardent supporter of European integration. Concerns about agricultural prices and farm incomes are normally addressed in the forum of the EC. However, 1990 saw several very vocal protests by farmers objecting to further reductions in EC price levels.

Dutch Government policies for agriculture in the 1990's emphasize a "competitive, safe, and sustainable agriculture." The Dutch define a sustainable agriculture as one that protects the environment over the long term and that meets socioeconomic objectives. This definition means that the agricultural economy should provide farmers with a standard of living on a par with the rest of Dutch society.

Concerns about the environment are at the top of the Netherlands' agenda. Many of the agricultural practices used in the Netherlands are highly intensive, and there has been increased concern over their effect on the environment.

In particular, the use of fertilizers and pesticides is causing concern over water, soil, and air pollution. The Government has initiated measures that will severely restrict the use of pesticides in the next 10 years. Also, the Dutch Government has implemented rules to restrict the use of manure. To deal with the large manure surplus, the Government has begun constructing a system of processing plants to convert the waste into dry fertilizer.

Imports and exports

The Netherlands has historically been a leading transshipper of agricultural commodities—a position ensured by the Dutch port of Rotterdam, the largest in the world. Dutch exports (based on January-September data) were forecast at $32.3 billion in 1990, up slightly from 1989. Imports were forecast at $18.5 billion, down slightly from the year before.

The vegetable and fruit sector had a banner year, with exports rising by more than 10 percent. Including re-exports of fruit and vegetables, exports totaled a record-high $4.2 billion. The opening of East European markets—especially increased demand from Germany as a result of unification—pushed exports up.

Trade performance by the livestock sectors was mixed. Export gains were anticipated for beef, veal, pork, poultry meat, and eggs. However, because of large world dairy stocks, trade in that sector was expected to be down slightly, with the exception of a 5-percent increase in cheese sales. Large EC stocks and low prices were expected to cut the value of butter exports by nearly one-third.

For domestic consumption and for value-added re-export, the Netherlands' imports include animal feeds such as brewers' grains, citrus pulp, and tapioca. From the United States, the Netherlands traditionally has imported soybeans, soy products, oilseeds, and coarse grains, as well as fresh grapefruit, raisins, nuts, wines, large tropical plants, tobacco, and forest products such as hardwood and plywood.

The U.S.-Dutch trade balance remains positive for the United States, although the U.S. position in the market has been slipping in recent years. Agricultural products from the United States accounted for roughly 8 percent of total Dutch import value in 1990, and Dutch products represented 3 percent of U.S. total import value.

Trade policy and prospects

The Netherlands exports about 60 percent of its total agricultural output and considers export expansion vital to the farm sector, as well as to the overall Dutch economy. However, although trade-producing activities are encouraged, they must not conflict with national priorities such as protecting the environment.

Generally the Dutch see free trade as working to their advantage. Within EC trade councils, the Dutch Government generally presses for liberalized trade, sometimes in opposition to the positions of other member countries. ■

New Zealand

N

Profile of agriculture

New Zealand lies in the temperate zone of the South Pacific and occupies an area about the size of Colorado. Hills, mountains, and some large coastal plains dominate the two main islands, North and South Island.

Farm production, processing, and transportation account for one-quarter of the gross national product. Labor directly employed on farms makes up about 11 percent of the total work force.

New Zealand has a diverse topography with a reasonably predictable climate, characterized by mild to warm weather with abundant rainfall. Dairy production is principally confined to the North Island. Fruit production is concentrated around the North Island's Bay of Plenty (kiwifruit) and Hawke Bay (apples and stonefruit), and at the northern tip of South Island (apples and kiwifruit).

Sheep, cattle, and forestry are common throughout the country. Although corn is grown on the North Island, most of the comparatively small grain production is found on the South Island.

Roughly a fourth of the land area is covered by indigenous forest; very little is allowed to be cut. As a result, most of New Zealand's commercial timber is produced from the land area covered by commercial or private plantations.

Milk, wool, beef, and sheep meat account for about 60 percent of New Zealand's agricultural output, excluding forestry. New Zealand continues to expand production of high-value products from the livestock, crop, and horticultural sectors.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production [1]		
Apples	360	385
Barley	327	398
Corn	139	158
Kiwifruit	223	272
Lentils	2.8	3.9
Oats	66	75
Peas	47	54
Roundwood [2]	10,150	11,040
Wheat	135	174
	thous. head	
Livestock numbers [3]		
Cattle		
Beef	4,530	4,650
Dairy	3,300	3,420
Deer	780	951
Goats	1,220	1,110
Sheep	60,600	58,300
	thous. metric tons	
Animal product output [4]		
Beef and veal	550	470
Butter	246	276
Casein	56	62
Cheese	128	122
Milk powder	373	385
Sheep meat	574	495
Wool	341	306

[1] *Crop year is Oct.-Sept. for fruit and calendar year for all others.*
[2] *Thousand cubic meters.*
[3] *Survey as of June 30 each year.*
[4] *Years are July-June for dairy items; Oct.-Sept. for meat and wool.*

Production highlights

Sheep numbers have declined from 70 million in the early 1980's to 58 million in 1990, affecting both wool and meat production. Lower international prices, the withdrawal of production incentives, and drought have contributed to the decline. Recently, wool prices have dropped, but prices for sheep meat have improved.

Sheep numbers are not expected to decline further, but mixed-livestock farmers continue to thin their sheep flocks in favor of cattle. Beef production exceeded sheep meat output for a brief period during 1989. The 1988/89 drought was partly responsible, as farmers moved cattle to market to conserve feed. Farmers are rebuilding their cattle herds.

The grain sector has struggled against poor weather and low international prices. Barley production now meets only domestic needs, while

New Zealand at a Glance

Population (1990): 3.3 million
Urban population: 76%
Population growth rate: 1%
Per capita income (1989): $12,066
Total land area: 270,534 square kilometers; 51% pasture and grazing, 23% indigenous forest, 18% tussock/marginal land, 4% commercial forests and plantations, 3% horticulture, 1% crops
Major crops: Barley, apples, kiwifruit
Livestock sector: Dairy products, sheep meat, beef, wool, venison, meat byproducts
Leading agricultural exports: Sheep meat, beef, dairy products, animal fat, wool, apples, kiwifruit, pears, forest products
Leading agricultural imports: Fruits, grain, nuts, vegetables
Agricultural imports as a share of total imports: 6%
U.S. share of total agricultural imports: 14%
Percent of labor force in agriculture: 11%
Membership in economic or trade organizations: Cairns, CER, GATT, IMF, OECD

Value of Agricultural Imports, 1989/90

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beverages	48.4	1
Chocolate preparations	36.1	50
Confectionery	76.2	2
Fruit preparations	41.6	7
Grains	60.5	25
Grapes	8.1	67
Nuts	7.6	44
Oranges	9.2	46
Raisins	13.8	18
Seeds	18.6	44
Sugar and confectionery	76.2	2
Vegetable oils	36.1	6
All agricultural products[2]	586.2	14

[1] *Values shown in U.S. dollars at U.S.$0.5860=N.Z.$1.*
[2] *Includes products not listed. Excludes forest products.*

wheat and corn production is supplemented by imports. Most of New Zealand's wheat is used to produce bread, and farmers have not been able to produce sufficient quantities of hard wheats. U.S. wheat is imported to grist with other wheat.

Milk production has not been rising much because of poor markets and remains at about 7.9 million metric tons. Apple output is rising and is currently an estimated 385,000 tons, including noncommercial production. Kiwifruit production has leveled off at about 270,000 tons and may actually decline slightly because many orchards are no longer profitable.

Farm and food policy

Agricultural production is export oriented. Traditional livestock sectors are still dominated by producer boards, while a new board has been created for kiwifruit orchardists. The Apple/Pear, Kiwifruit, and Dairy Boards pay farmers, but only out of market returns. The Wool Board intervenes at auctions, but its wool stocks are rising and funds are being used up.

Farmers have acquired nearly 80 percent of meat processing facilities, and they hope to improve prices by better presentation. The Government is selling as many of its holdings of state forests as it can to let the private sector manage commercial forestry.

Since the mid-1980's, the Government has removed itself from direct and some indirect assistance to the agricultural sector and reformed other areas of the economy.

Imports and exports

New Zealand is a net agricultural exporter, with sales of $5.7 billion in 1989 versus imports of $586 million.

Two-thirds of New Zealand's merchandise exports are agricultural, and the country is currently experiencing its worst balance-of-payments position ever, principally because of a decline in agricultural exports. While international prices for meat and dairy products improved in 1989, production was falling. In the year ending June 1990, meat exports were down 17 percent in volume to 650,000 tons and 4 percent in value to $1.34 billion.

Dairy exports were down 3 percent in volume, but export receipts were up 14 percent to $1.5 billion, although some sales came out of stocks. Both the volume and value of wool exports dropped 25 percent in 1989/90.

An increase of nearly one-third in the volume of log exports to 2.7 million cubic meters and a 27-percent increase in receipts to $233 million reflected the maturation of many forest plantations developed in the early 1960's.

Horticultural exports now exceed a billion New Zealand dollars. Apples and kiwifruit make up 38 percent by volume and 75 percent by value. Squash, asparagus, peas, onions, berries, seeds, and preparations of fruit and vegetables all figure significantly.

New Zealand is a small importer of agricultural products and a net importer of grain and tropical fruits. Agricultural imports in 1990 grew 4 percent by value, with the largest increases in fruits, grain, and food preparations.

A noticeable increase in Australian packaged goods for sale by retailers illustrates the growing impact on the economy of the Closer Economic Relations Agreement (CER). About 40 percent of New Zealand's agricultural imports come from Australia. Both countries now import each other's commodities and export back the value-added product.

After Australia, the United States is the second largest supplier of agricultural products to New Zealand. The United States currently supplies about 25 percent of the country's grain imports, and the U.S. share of wheat imports is rising.

Trade policy and prospects

Tariffs are New Zealand's main form of protection for its agricultural sector. Programs begun in the mid-1980's to reduce tariffs by up to 50 percent by July 1993 continue; it is not clear what will happen beyond that date.

The country has a major interest in the outcome of the GATT talks, particularly in the agricultural sector. As a member of the Cairns Group, New Zealand is pressing for the elimination of export subsidies, while acknowledging the need for some countries to find ways of supporting smaller farmers without damaging commercial trade. ■

Nigeria

N

Profile of agriculture

Located on the west coast of Africa, Nigeria occupies an area about the size of California, Nevada, and Arizona combined. Its terrain ranges from tropical forests to open woodlands, grasslands, and semi-desert.

The overwhelming bulk of Nigeria's crops are produced on small, labor-intensive farms, which employ 60 percent of the nation's labor force. National and international efforts to boost production have focused on small farmers.

Nigeria produces cocoa, sugar, palm oil, yams, cassava, sorghum, millet, corn, rice, wheat, livestock, peanuts, fruits and vegetables, tobacco, rubber, and cotton. Root crops provide the largest volume of agricultural production and may be slightly more important than grains as basic staples. In the far north, sorghum and millet dominate the diet, whereas cassava and yams dominate in the south.

Nigeria is nearly self-sufficient in food production and could become fully self-sufficient (on a net basis) in the near future, even though its efforts to produce wheat and other temperate climate crops may not be cost-effective.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Cassava	19,044	24,000
Cocoa	155	150
Corn	1,900	1,520
Cotton lint	32	45
Millet	2,700	2,160
Peanuts	350	370
Rice, milled	540	540
Rubber	70	65
Sorghum	3,500	2,800
Soybeans	60	65
Sugar, refined	50	55
Vegetable oil	781	757
Wheat	60	65
Yams	13,624	13,000

	1988	*1989*
	mil. head	
Livestock numbers		
Beef and dairy cattle	12.0	12.0
Hogs	1.3	1.4
Poultry	130.0	130.0
Sheep and goats	37.0	32.0

Production highlights

Growth in food availability has been racing with Nigeria's annual population growth over the past decade. Between 1985 and 1988 Nigeria banned imports of vegetable oil and most grains.

Nigeria was importing 1.5 million metric tons of wheat a year in the mid-1980's. However, after the introduction of a wheat import ban in 1987, many bakeries were forced to close down and bread consumption declined sharply. Consumers shifted to other foods, such as root crops, causing prices to skyrocket for bread substitutes. Many consumers shifted to the cheapest available food, particularly cassava. New disease-resistant cassava varieties were widely adopted, helping to compensate in part for shortages in cereals.

Millet and sorghum are staple foods in the arid north. Millet may survive in the most arid cereal regions. The area planted remains constant, and no major efforts for varietal improvement have been made. Corn and sorghum tend to compete for the same land in some areas with more rain.

Rice production is increasing in Nigeria, although smuggled products may represent over a third of the rice consumed. Production problems include lack of good quality seed, as well as poor harvesting and processing techniques.

Nigeria at a Glance

Population (1990): 119 million
Urban population: 25-30%
Population growth rate: 3.2%
Per capita income (1989): Under $230
Land area: 910,770 square kilometers, 31% arable land
Major crops: Cassava, cocoa, corn, cotton, fruits, millet, palm oil, peanuts, rice, sugar, vegetables, wheat, yams
Livestock sector: Beef, dairy, eggs, goats, hogs, poultry, sheep
Leading agricultural exports: Cocoa, natural rubber, palm kernels
Leading agricultural imports: Dairy products, sugar, tallow
Agricultural imports as a share of total imports: 5%
U.S. share of total agricultural imports: 6%
Percent of labor force in agriculture: 60%

Major oilseeds produced in Nigeria include palm kernels, peanuts, and soybeans. Production of palm oil and palm kernel oil is increasing slowly. There is considerable investment in crushing and refining of edible oil. Some protein meals are imported from time to time for the poultry industry. Local soybean production is undergoing slow expansion, with occasional marketing difficulties but with a growing long-term market.

Since the mid-1980's, Nigerian cotton production has been increasing due to relatively strong demand by the textile industry and high import duties imposed in 1987. Also, some money

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil. [1]	*%*
Selected products		
Hop cones	2.4	73
Malt extracts	4.8	12
Milk powder	22.6	0
Offals	1.3	0
Sorghum	5.5	51
Sugar and sugar beets	67.8	0
All agricultural products [2]	111.6	6

[1] *Values are shown in U.S. dollars at U.S.$1=7.4 nairas.*
[2] *Includes products not listed.*

has been invested in large-scale cotton production. Small farmers have traditionally used little fertilizer or insecticides to grow cotton and have planted it late, after planting their food crops. In the last few years, cotton farmers have begun responding to improved marketing opportunities by intensifying their efforts.

Nigerian cocoa production expanded impressively during 1987/88 through better cultivation practices, stimulated by increased farm prices. However, there is little long-term investment in new plantations. Production in 1988/89 fell slightly due to excessive rain early in the crop season.

Nigerian meat consumption is relatively low. Cattle, largely raised by nomadic herders, are widely spread throughout the country. Most of the cattle are similar to the Zebu breed. Efforts continue to introduce European and U.S. dairy cattle, or crossbreeds, but most of these efforts have failed because of poor disease resistance or tropical management practices.

Goats and sheep provide a significant portion of the national meat supply, and there is a growing, albeit small, production of pigs.

Nigeria had been developing a modern poultry industry, with increasingly scientific feed compounding. In the mid-1980's, small backyard operators were replaced by large commercial farms of 10,000 birds or more. However, a 1984 ban on corn imports caused severe contraction of the industry. Subsequently, a sharp fall in incomes forced consumers to cut back on consumption of eggs and poultry meat. For the last several years, the poultry industry has been operating at about a fourth of its 1984 level.

Farm and food policy

The Nigerian Government champions private farming and relatively free domestic commerce. A stronger reliance on market incentives is shown in state efforts to raise agricultural productivity and reduce import demand.

The Government stepped away from direct control over farming in 1986 by abolishing the commodity boards, which attempted to monopolize buying and to fix prices for grains, cocoa, palm products, cotton, rubber, and peanuts.

While rejecting the idea of controlling prices directly, the Government recognizes that the current food production system results in wide price fluctuations. One effort at a solution is the building of silos in different parts of the country in order to allow for the storage and timely release of commodity reserves. The Government also has tried to stimulate farm entrepreneurs by making credit and crop insurance available.

Nigeria is making a major effort to boost wheat production, with the central and state Governments channeling money to encourage private farmers to grow wheat. Most of Nigeria is too hot to grow wheat efficiently. Wheat can be grown in areas in the far north, where irrigated and swampy land is used during the cool dry season.

Local millers may not legally obtain wheat through imports and are expected to buy local wheat. The price of local wheat is more than twice the international price, and production remains at a small fraction of demand.

Nigeria hopes to conserve foreign exchange by substituting domestic crops for imports and by raising prices for domestic production.

Imports and exports

Nigeria is a net agricultural exporter, with sales of $355 million, versus purchases of $300 million in 1989. Nigeria's major exports are cocoa, palm kernel, hides, skins, and rubber. It also produces a number of other crops for export, including coffee, peanuts, and cashews.

Among the major bulk agricultural commodities imported legally are tallow, beverage flavors, and tobacco. Large quantities of banned items such as flour, rice, and vegetable oil are smuggled into the country.

Trade policy and prospects

Nigeria has implemented a protectionist policy in agricultural trade, with import bans on a wide range of food items, including fruits, vegetables, tubers, corn, rice, wheat, barley, malt, vegetable oil, meat, poultry, and poultry products. Heavy import duties apply to most food items not prohibited by the bans, as well as to some nonfood items such as cotton.

The Government is determined to continue its import bans, hoping that, in the long run, the stimulus of high internal prices will create benefits to offset the short-term difficulties of high prices for food and raw materials.

In response to rising food prices, the Government has banned exports of beans, cereals, tubers, and their products. It also bans the re-export of imported food items. ■

Norway

N

Profile of agriculture

Norway covers 323,877 square kilometers, but only 3 percent of the land is used for agriculture. About 20 percent is forested and the rest is mountains and lakes. Much of the country lies above the Arctic Circle, but the influence of the Gulf Stream on the weather allows farming in virtually all parts of Norway.

Self-sufficiency is the overall national agricultural objective. In general, the agricultural sector is characterized by high production costs, stringent border protection, and a highly subsidized farm community.

To date, Norway has met its self-sufficiency objective in milk products, meat (beef, pork, sheep, and poultry), feed grains, potatoes, and eggs. However, the overall self-sufficiency rate is only about 50 percent, as Norway imports large quantities of sugar, wheat, oilseeds, vegetables, and fruits, as well as other products not produced domestically because of the climate.

The principal agricultural areas are in central and eastern Norway, but small farms are scattered across the country and provide a livelihood for many small communities. Because of the long winter and short summer, Norway is strongly geared toward animal production, which accounts for about two-thirds of farm income.

Milk is the most important product throughout Norway. Grain is mainly grown in the middle and eastern sections; the most important grains are barley, oats, and wheat.

Agricultural Production

	1988	*1989*
	thous. metric tons	
Crop production		
Berries	19	21
Fruits	35	43
Grains	1,066	1,165
Potatoes	551	500
Root crops	187	151
Vegetables	121	114
	thous. head	
Livestock numbers		
Beef cattle	596	611
Dairy cows	335	339
Hogs	745	712
Poultry	3,732	3,791
Sheep	2,253	2,232

Production highlights

Norway produced a record 1990/91 grain crop of about 1.5 million tons, of which barley and oats accounted for roughly 85 percent. The quality of the grain was excellent in 1990, and more than 50 percent of the wheat output qualified as bread grain. Norway will be self-sufficient in feed grains for 1990/91, but imports of bread wheat will still be necessary.

Meat production in Norway is aimed at the domestic market; total consumption of meat and poultry is around 200,000 tons. The 1990 surplus (mainly red meat) stood at 12,000 tons and primarily reflects the slaughter of cows as farmers attempted to bring milk production into closer alignment with production quotas.

Milk production in 1990 was placed at around 1,850 million liters, a surplus of about 50 million liters over the goal set by the Government and farmers' organizations. Such surpluses are expected to remain part of Norway's dairy scene for the foreseeable future.

Farm and food policy

Norwegian farming has been highly subsidized and protected for years. Rural development, self-sufficiency, and discouragement of an excessive migration into urban areas have been the principal goals behind Government policies. However, the result has been surpluses of many products and costs far above international levels.

Norway at a Glance

Population (1990): 4.25 million
Urban population: 71%
Population growth rate: 0.43%
Per capita income (1990): $21,502
Total land area: 323,877 square kilometers; 3% cultivated
Major crops: Grain (barley, oats, and wheat), silage, forest products
Livestock sector: Dairy products, beef, pork, mutton, poultry, eggs
Leading agricultural exports: Cheese, fats and oils, forest products, hides and skins
Leading agricultural imports: Sugar, coffee, grain, fruits, vegetables, nuts, soybeans, tobacco, lumber
Agricultural imports as share of total imports (1989): 7%
U.S. share of total agricultural imports (1989): 9%
Percent of population in agriculture (1990): 6.5%
Membership in economic or trade organizations: CCC, Council of Europe, DAC, EFTA, GATT, IBRD, ICAC, ICO, IDA, IFAD, IFC, IMF, IWC, Nordic Council, OECD, WSG

Norwegian agriculture is protected from international competition by quantitative restrictions on imports of various products, as well as outright bans on imports of products in which the country aims to be self-sufficient.

Although overall food security and income support to the rural population will continue to be prominent features of domestic food policies, many factors

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cotton	2	100
Fruits and nuts	181	15
Soybeans	81	49
Tobacco	26	54
Wheat	48	21
All agricultural products[2]	1,710	9

[1] *Values are shown in U.S. dollars at U.S.$1=6.29* kroner.
[2] *Includes products not listed.*

have already led to revisions in the longstanding protectionist approach to agricultural policy.

These factors include internal budget and development pressures, the international reforms consequent to the conclusion of the Uruguay Round of Multilateral Trade Negotiations, and the ongoing negotiations between the European Free Trade Association (EFTA)—of which Norway is a member—and the European Community.

Imports and exports

Norway is a net importer of agricultural products and imported approximately $1.7 billion in 1989, compared with exports of roughly $600 million. A little more than half of the country's imports are consumer-oriented high-value products.

Most of these are horticultural and tropical products such as fresh fruits (oranges, bananas, apples, and grapes), dry edible nuts, fruit and vegetable juices, fresh vegetables, chocolate and chocolate products, wines, live plants, cut flowers, and foliage. The top 10 suppliers of these products are the Netherlands, Denmark, Sweden, Spain, Germany, the United States, Italy, France, Israel, and Switzerland.

The U.S. share of Norway's agricultural trade is about 9 percent of imports and 6 percent of exports. The United States exports soybeans, leaf tobacco, raw cotton, grains, fruit, and nuts to Norway and imports cheeses, fats, and oils.

The best future market prospects in Norway include rice, tropical products, fresh vegetables, and a full range of consumer-oriented high-value products (fresh, frozen, microwaveable, and canned).

Trade policy and prospects

Norwegian trade in agricultural products is highly insulated from international competition, most notably in sectors such as milk products, meat, and fresh fruits and vegetables.

Import licenses and quotas apply for most domestic products until market prices rise above target ceilings. These price guidelines, as well as the related import protection, are set by negotiations with farm organizations. Norway employs quantitative restrictions and variable import levies (in addition to quotas and licensing) to offset the difference between domestic and import prices of certain meat and dairy products.

Imports of all grains and feed concentrates are made by a Government monopoly, the Norwegian Grain Corporation. Alcoholic beverages also are subject to state trading.

Imports of some fruits and vegetables are banned on certain dates to protect domestic production.

Access to the Norwegian market could improve if the Uruguay Round of Multilateral Trade Negotiations causes Norway to shift from quantitative restrictions for most agricultural products to variable tariffs or customs duty equivalents. Such a change would probably result in greater access for most agricultural products to the Norwegian market over time, and would also give Norwegian consumers a chance to choose between a wider range of products at more competitive prices.

Regardless of what happens in the Uruguay Round, though, Norway's overall national agricultural objective will remain food security, which means that the country will continue producing most of the products that it produces currently. The main difference probably will be a change from price supports to more direct supports to farmers, which would result in lower consumer prices. ■

Pakistan

P

Profile of agriculture

Agriculture is the backbone of Pakistan's economy. It supports an increasing food demand, economic growth, and the development of other industries and services. A major part of the economy depends on farming, storage and distribution of agricultural commodities, and wages paid by farming and agricultural businesses (roughly one-fourth of the gross national product). Agriculture accounts for about half of household consumption, just over half of employment, and nearly two-thirds of exports.

Agricultural Production

	1989/90	*1990/91*
	thous. metric tons	
Crop production [1]		
Corn	1,179	1,170
Cotton	1,455	1,530
Cottonseed	2,910	3,060
Rapeseed and mustardseed	233	240
Rice	3,220	3,142
Sugarcane	35,494	39,000
Wheat	14,419	14,288
	mil. head	
Livestock numbers		
Buffaloes	14.5	15.4
Cattle	17.6	17.8
Goats	35.4	36.7
Poultry	184.7	205.9
Sheep	29.2	30.2
	thous. metric tons	
Animal product output		
Beef	658	691
Eggs	4,680	5,071
Milk	14,528	15,400
Mutton	652	698
Poultry meat	195	215

[1] *Marketing years are Aug.-July for cotton; Oct.-Sept. for rice, sugarcane, rapeseed, mustardseed, and cottonseed; May-April for wheat; and July-June for all livestock and products.*

Crops are the main sector in agriculture, and Pakistan has two cropping seasons—summer and winter. Rice, cotton, corn, and sugarcane are the main summer crops; wheat, garbanzos, tobacco, and rapeseed are the main winter crops.

The poultry and livestock sectors are developing. Water buffalo, cattle, sheep, and goats are kept as draft animals by crop farmers and provide milk and meat for farm families. Poultry is emerging as a commercial industry, and potential exists for the development of a commercial dairy industry.

Pakistan produces a surplus of some agricultural commodities, most notably rice and cotton. However, domestic production of wheat, oilseeds, and sugarcane falls short of demand. As a result, the country is a major competitor in the world rice and cotton markets and at the same time imports substantial quantities of wheat, sugarcane, and edible oils (soybean and palm). Pakistan is exploring export markets for its livestock, poultry, vegetables, and fruits.

Production highlights

The agricultural sector is making satisfactory progress during the Seventh 5-Year Plan (1988-93). Government estimates show an annual growth rate of 4 percent during 1989/90 (July-June), only slightly less than the target of 5.2 percent. Growth was seen in several areas, including cotton and livestock, while setbacks occurred in wheat, rice, sugarcane, fisheries, and forestry.

The growth in the agricultural sector in 1989/90 was mainly attributable to gains in cotton output because of good weather and improved crop management.

The 1989/90 rice crop was planted under favorable conditions, but excessive rain and flooding and a late-season infestation of white flies reduced the crop to 3.2 million metric tons. In 1990/91 yields of basmati (fragrant) rice suffered as a result of water problems. Wheat production declined in 1990/91 from a record high of 14.4 to 14.3 million metric tons because of a shortage of fertilizers during the planting season.

Livestock production is gradually increasing. During 1989/90 the poultry sector increased almost 10 percent as a result of effective control of the hydropericardium disease that had caused a high mortality rate in flocks in recent years. Slower growth is

Pakistan at a Glance

Population (1990): 110.4 million
Urban population: 33%
Population growth rate: 3.1%
Per capita income (1990): $371
Total land area: 803,943 square kilometers; 26-30% agricultural
Major crops: Cotton, rice, sugarcane, wheat
Livestock sector: Poultry, sheep, buffalo, cattle, goats
Leading agricultural exports: Cotton, rice
Leading agricultural imports: Edible oil, wheat, tea, tallow
Agricultural imports as a share of total imports: 16.5%
U.S. share of total agricultural imports: 40%
Percent of labor force in agriculture: 51%
Membership in economic or trade organizations: Commonwealth, GATT, IBRD, IDA, IFC, IMF, SAARC

Value of Agricultural Imports, 1989/90 [1]

	Total imports	*U.S. share*
	$ mil. [2]	*%*
Selected products		
Edible oil	372.9	46
Fruits	29.5	0
Milk and products	23.8	0
Pulses	29.7	1
Sugar	89.5	0
Tallow	44.1	29
Tea	180.8	0
Wheat	400.8	72
Wool	24.7	0
Total [3]	1,195.8	40

[1] *July-June.*
[2] *Values are shown in U.S. dollars at U.S.$1=21.40* rupees. *Includes commercial and concessional imports.*
[3] *Includes only items listed.*

expected in 1990/91 because farmers are facing a price squeeze between feed costs and poultry meat prices.

Farm and food policy

Pakistan's farm policy aims to increase food self-sufficiency, improve returns to farmers, alleviate rural poverty, accelerate the pace of rural development, and expand foreign exchange earnings.

A key element of Pakistan's agricultural policy since 1980 has been the implementation of a price support program aimed at covering the costs of production and stabilizing domestic prices against widely fluctuating international prices, thereby providing an incentive for increased crop production. However, due to overriding concerns with keeping down the price to urban consumers, price supports in the past have been too low. This is especially the case for wheat, the main staple crop. Pakistan has one of the lowest wheat prices in the world.

As part of its current agricultural plan, the Pakistani Government is trying to strengthen its policy of price supports, particularly for oilseeds.

Imports and exports

During 1989/90 Pakistan was a major trader of agricultural commodities, with imports totaling about $1.2 billion while exports declined to just over $1 billion. The main agricultural imports include wheat, edible oil (soybean and palm), tea, sugar, tallow, pulses, dry milk, and wool. Rice, cotton, and molasses are the major exports.

Wheat imports declined slightly to 2 million metric tons, but remained high because the Government wanted to boost stock levels. The United States supplied three-fourths of the total.

Pakistan depends on imports for close to 70 percent of its total vegetable oil needs. Imports of Malaysian palm oil and U.S. soybean oil reached a record 940,000 metric tons during 1989/90. The U.S. soybean oil is provided under food aid and agricultural credit guarantee programs.

Pakistan is a major player in the rice and cotton export markets, but its cotton exports have declined as a result of a decision to restrain exports of raw cotton in favor of exporting value-added yarns and textiles. In 1989/90, cotton exports dropped by half to about $445 million. Rice exports also fell by about $70 million to $240 million. Exports of coarse rice faced stiff competition in the world market.

The total value of major agricultural imports from the United States declined by about $100 million to $473 million in 1989/90. The value of U.S. exports of wheat, soybean oil, and tallow all declined. On the other hand, each year the United States imports less than $15 million worth of agricultural products from Pakistan. Pakistani exports to the United States include spices, dates, and basmati rice.

Trade policy and prospects

In a process begun in 1989, Pakistan has lifted most of its import bans on agricultural products. The only bans remaining are on hogs, pork, and other meats and liquor and wine. These bans are based on religious principles of Islam.

With most of the bans removed, the remaining obstacles to food and forestry imports are high duties and substantial additional import taxes. For example, the import bans on cigarettes, confectionery products, and snack foods of puffed grains were replaced by tariffs of 100 percent ad valorem. With the exception of Douglas fir logs, which enjoy a 20-percent duty, most logs and lumber products also face a 100-percent duty.

Most other high-value agricultural products face duties of 80 to 100 percent ad valorem. The other taxes levied on imports add about 25 to 35 percent to costs. The purpose of the high tariffs is to conserve foreign exchange and provide funds to the Government.

It is unlikely that Pakistan will achieve its goal of self-sufficiency in wheat production, although the level of imports will continue to vary considerably from year to year. The United States is likely to remain a major supplier because of its credit programs and because of Pakistan's insistence on importing white wheat.

To promote the development of its poultry and livestock sector, Pakistan has begun importing soybean meal, and duty restrictions have been removed for imports of corn. Other areas of opportunity include poultry breeding stock, dry peas, and forest products. ■

Paraguay

P

Profile of agriculture

Agriculture, including livestock and fishing, is fundamental to the Paraguayan economy and accounts for nearly 30 percent of the nation's gross domestic product (GDP). Agriculture employs approximately 45 percent of the labor force and generates 90 percent of total export earnings.

Landlocked in southern South America, Paraguay is bordered by Argentina, Bolivia, and Brazil. Access to Atlantic Ocean ports is by way of the Parana-Paraguay Rivers system that flows south through Argentina, by rail via Argentina to the Argentina/Uruguay Rio de la Plata estuary, or overland by highway across southern Brazil. Goods are not moved to Pacific Ocean ports.

Major crops include soybeans, cotton, corn, manioc, wheat, dry beans, and sugarcane. The livestock sector contributed approximately 10 percent of Paraguay's 1989 GDP. The country is self-sufficient in most foods, and surpluses are mostly exported.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Corn	1,000	1,100
Cotton (lint)	220	225
Soybeans	1,615	1,500
Sugarcane	2,870	2,260
Tobacco	2	2
Tung	166	163
	mil. head	
Livestock numbers		
Cattle		
Beef	8.0	8.3
Dairy	0.6	0.6
Hogs	2.3	2.4
Horses	0.3	0.3
Poultry	16.9	17.0
Sheep	0.4	0.5

Production highlights

Paraguay's economy is highly dependent on the performance of two crops—soybeans and cotton—which together accounted for about 70 percent of total 1989 export earnings. In 1990, bad weather reduced yields and crop quality.

Total soybean output declined 8 percent from 1989, to 1.5 million tons. In the case of cotton, an expansion in planted area (the result of an increase in the number of producers and hectares through the Government's agrarian reform program) more than offset weather-induced yield reductions. Weather problems did, however, lower the normally high quality of Paraguayan cotton for the 1990 record 225-million-ton harvest.

Nearly 100 percent of Paraguayan cotton is hand picked. Cotton production typically is carried out by subsistence farmers on units averaging 3 hectares.

Total Paraguayan grain production for 1989 was estimated at over 15 percent above 1988. Led by increases in wheat and corn output, the total 1989 grain harvest slightly exceeded 1.6 million metric tons. For 1990, however, major losses in wheat production resulted in a 5-percent decrease in grain output (to 1.5 million tons). Other grain crops produced in Paraguay include rice, sorghum, and oats.

Sugarcane is used to produce sugar, fuel alcohol, and *cana*, an alcoholic beverage. Cane output in 1990 was down 20 percent from the year before because of a lack of Government incentives, competition from Brazilian sugar and alcohol, and weather problems. The outlook for Paraguayan sugarcane production depends on the Government's fuel policy. There has been little interest in the crop as an energy source in recent years, however.

Paraguay at a Glance

Population (1989): 4.5 million
Population growth rate: 3%
Per capita income (1989): $1,380
Total land area: 406,750 square kilometers: 20% arable land, 1% permanent crops, 39% meadows and pastures, 35% forest and woodland, 5% other
Major crops: Coffee, corn, cotton, rice, soybeans, sugarcane, wheat
Livestock sector: Beef and dairy cattle, hogs
Leading agricultural exports: Soybeans, cotton, beef, essential oils, forest products
Leading agricultural imports: Processed fruits and vegetables, livestock genetics, whiskey, cigarettes
Agricultural imports as a share of total imports (1989): 12%
U.S. share of total agricultural imports (1989): 6%
Percent of labor force in agriculture: 44%
Membership in economic or trade organizations: ALADI, IBRD, IDA, IDB, IFAD, IMF, OAS, SELA

Cottonseed production increased with the rise in cotton area and output. The 1989 cottonseed crop reached 365 million metric tons, with 1990 output increasing to 370 million. Whereas soybeans are predominantly produced for export as beans, all cottonseed not saved for planting must be crushed domestically.

Coffee production for the 1989/90 crop year was estimated at 26,000 metric tons or 430,000 60-kilogram bags, an increase of approximately 14,000 bags over the previous year.

Farm and food policy

Following the end of the 34-year Strossner rule in February 1989, the Government moved to modernize the economy. Direct Government financing of agricultural production was reduced as monetary policy tightened, and the ensuing credit pinch was felt by the agricultural sector with the 1989/90 crop plantings.

Continuation of the policies has had a marked impact on 1990/91 crop plantings, especially in light of the increased decapitalization of agriculture caused by the poor 1990 harvests.

Commodity prices are determined by supply and demand. With liberalization of the exchange rate and export system in 1989, producers and exporters have confronted relatively unobstructed international market forces.

Imports and exports

Paraguay is a net agricultural exporter, with sales of $972 million in 1989 versus registered purchases of $65 million. Actual imports, however, are thought to be much higher, reflecting products that move unofficially into Paraguay from neighboring Brazil and Argentina.

Agricultural exports constituted over 90 percent of Paraguay's total 1989 exports of $1 billion. The three most important export commodities continue to be soybeans, cotton fiber, and beef.

Soybeans accounted for $382.5 million, or 38 percent of the total export value in 1989. Exports of soybean meal and oil for the year were estimated at 90,000 tons and 15,000 tons, respectively.

Cotton fiber exports for 1989, at $306.9 million, made up 30 percent of total export earnings; 221,000 metric tons were exported. Brazil, Paraguay's major cotton buyer, purchased 120,000 tons.

Beef ranked third as an export commodity in 1989, at $96.1 million and 75,000 metric tons—10 percent of total exports. Major markets were the European Community and neighboring South American countries.

Paraguay exported $8.7 million worth of agricultural products to the United States in 1989, down 45 percent from the previous year. Principal exports included coffee, tung oil, and essential oils.

Agricultural products, valued at $81.6 million, accounted for 12 percent of total imports in 1989, down from 16 percent in 1988. Paraguay imported $4.8 million worth of agricultural products from the United States, including livestock genetics and processed fruits and vegetables.

Trade policy and prospects

Export policies were significantly changed in 1989 by the new Government. The liberalizing changes included elimination of the two-tier exchange rate system, abolition of the system used to set export values, and a substantial reduction in export duties and taxes.

The new system placed Paraguayan producers and exporters in direct contact with international market forces, enticed nearly all exports to move through official channels, and allowed exporters and producers to realize relatively higher prices and to be more competitive.

The system was unanimously accepted by the private sector, which had criticized previous economic policies as being arbitrary and discriminatory, hampering trade, and encouraging contraband movements.

The new policies removed Government control of export prices. Lower export taxes motivated agricultural producers and exporters to be more competitive on the world market and to increase exports. Unification of the exchange rate enabled exporters to realize the full international value of their sales at the prevailing free-market rate of exchange.

While the exchange rate is free to float within the laws of supply and demand, the Government does participate in the market to influence the value of the *guaraní* and, thus, the international value of Paraguayan products. Although they benefited from the liberalization of the export system in 1989, some exporters have complained of the unexpected stability of the *guaraní* during 1990, in the face of over-30-percent annual inflation.

There are no licensing requirements for exports or imports. Imported products that compete with domestic production may be subject to special tariff treatment.

The Government may impose temporary prohibitive or restrictive measures to protect or promote the economic or social development of the country, to maintain a sound trade balance, or to offset the dumping of foreign goods. In practice, such import bans are often imposed on seasonal agricultural products competing with domestic production. ■

Peru

P

Profile of agriculture

Peru, the third largest country in South America, is about three times the size of California. Agriculture provides 12 percent of the gross domestic product and employs about 35 percent of the population.

Most farmers work on small subsistence plots in the highlands of the Andes, where they grow potatoes, beans, vegetables, corn, and fodder for their small herds of cattle, sheep, goats, llamas, vicunas, alpacas, and cuy (guinea pigs).

There are some small- to medium-sized farms along the coast that produce rice and cotton, as well as fruits and vegetables, for domestic and export sales. There are also some large-scale, cooperatively owned farms that produce sugarcane for export to the United States.

The Peruvian coast—unlike that of its Andean neighbors of Colombia, Ecuador, and Chile—is one of the driest deserts in the world. As a result, Peru is unable to produce more than 80 percent of its food needs.

Staple food crops include rice, sweet corn, potatoes, yucca, beans, and fresh vegetables. The leading agricultural products for industrial use or further processing are cotton, sugarcane, coffee, poultry meat, eggs, milk, and wool.

In most years, Peru produces the world's largest catch of fish meal from anchovy and sardines. Peru exports canned tuna, Pacific bass, canned sardines, frozen hake, mackerel, and some "farm-grown" shrimp.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Barley	125	80
Coffee	84	69
Corn for feed	650	700
Cotton	112	80
Dry beans	55	50
Potatoes	1,700	1,200
Rice	615	598
Sorghum	35	15
Sugar, raw	626	500
Wheat	159	85
	mil. head	
Livestock numbers		
Cattle	4.0	3.8
Chicken		
Broilers	88.1	95.7
Layers	7.1	7.2
Goats	1.7	1.7
Hogs	2.3	2.3
Sheep	12.9	12.5
	thous. metric tons	
Animal product output		
Beef	112	115
Eggs (chicken)	82	84
Lamb, mutton, and goat	27	30
Milk	668	600
Pork	70	66
Poultry meat	185	200

Production highlights

A devastating drought cut farm output in 1990, and a continuing water shortage delayed planting of much of the 1991 grain crop. Total grain output in 1991 is expected to drop sharply because of a severe credit crunch and the late (and inadequate) rainfall.

Rice production is expected to fall dramatically, requiring record imports of about 500,000 tons in 1991 and early 1992. However, feed grain production may recover to pre-drought levels as some cotton and rice areas switch over to corn and sorghum production.

In addition, a second crop of corn was planted after heavy rains arrived in central and southern Peru late in 1990. This should keep total corn output in late 1991 near normal levels of about 700,000 tons. Nevertheless, import demand continues to mount inasmuch as poultry production has rebounded.

Although production of oilseeds is relatively small in Peru, the competing production of fish meal and fish oil is one of the highest, if not the highest, in the world. Rendered from Peru's anchovy and sardine catch, annual pro-

Peru at a Glance

Population (1990): 22.4 million
Urban population: 65-70%
Population growth rate: 2.6%
Per capita income (1990): $900
Total land area: 1.3 million square kilometers
Major crops: Potatoes, corn, rice, sugarcane, coffee, cotton, wheat, barley, dried beans
Livestock sector: Poultry meat and eggs, dairy and beef cattle, swine, sheep, goats, llamas, alpacas, and vicunas
Leading agricultural exports: Coffee, sugar, cotton, wool (from sheep, alpacas, and vicunas)
Leading agricultural imports: Wheat and flour, corn, rice, barley and malt, soybean oil, soybean meal, sugar, dairy products, beef, poultry meat
Agricultural imports as a share of total imports: 20%
U.S. share of total agricultural imports: 30%
Percent of population in agriculture: 35%
Membership in economic or trade organizations: ALADI, Andean Pact, GATT, IBRD, ICO, IDA, IDB, IFAD, IFC, IMF, IWC, SELA

duction and exports amount to about 1,100,000 tons of fish meal and 300,000 to 200,000 tons of fish oil, respectively.

Despite large fish meal and oil exports, Peru imports about 100,000 tons of soybean meal and 70,000 tons of soybean oil for blending with fish meal and oil. The fish products have a strong taste, and blending helps to avoid problems. Poultry producers, for example, limit fish meal to less than 7 percent of the poultry feed or else the chicken and eggs have a strong, fishy flavor. Fish oil uses are usually limited to canned tuna and various low-cost cooking oils.

Most soybean meal and oil imports come from Bolivia and Argentina. Bolivia receives duty-free trade preferences under the Andean Pact, and Argentina receives tariff preferences because of its membership in the Latin American Integration Association. However, U.S. exporters may be able to capture the lion's share of the Peruvian market once the Enterprise for the Americas Initiative is enacted.

Peru was once a leading exporter of cotton, but production has dropped recently because of the shortfalls in farm credit and water supplies. For 1991, there may be some imports of 13,000 to 15,000 (480-pound) bales because of the crop shortfall. At the same time, Peru may continue to export about 70,000 to 80,000 bales of pima and other specialty cotton grades.

Coffee output has dropped because the coffee growing areas are located in a terrorist controlled area of the central highlands. Despite the production drop, coffee still accounts for a large share of Peru's agricultural exports. Production and exports are of the Arabic mild varieties.

Farm and food policy

The Government of Peru has set a high priority on promoting agricultural production and exports.

The Government is trying to boost local production with technical assistance and improved seed varieties. However, inefficiency and low yields in many crops continue to hamper gains in production.

Imports and exports

With Peru's relatively high population growth rate and large migration of people from rural to urban areas, the agricultural sector has not been able to keep pace with growth in food needs. As a consequence, the country is a net agricultural importer, with purchases of $520 million in 1990, up about 20 percent from the previous year.

Peru must import nearly all of its wheat and soybean meal, 20 to 30 percent of its feed corn, and a quarter of its sugar and cooking oil. Peru also imports rice in most years—especially in poor crop years such as 1990.

Leading items acquired from the United States include wheat at about 250,000 tons annually (valued at about $40 million), corn at about 250,000 tons annually (valued at about $25 million), and sugar at about 150,000 tons annually ($45 million).

Rice imports, when needed, usually come from Thailand, but the first commercial sale of U.S. rice to Peru was made in 1989 with short-term financing provided by the U.S. exporter. Rice imports continue to expand, pushed up by poor crops in both 1990 and 1991.

Imports of high-quality dairy breeding cattle increased when the Government tried to reduce dairy product imports, but cattle imports have slowed. Dried fruits are needed seasonally, but the potential for import growth is limited.

Because of low income levels and the year-round availability of fresh foods, the demand for processed or convenience food imports is low. Imports of high-value products such as meat, dried fruits, and wine have dropped sharply. Imports of barley malt for beer production have remained strong, as beer consumption has continued to grow unaffected by the economic recession.

Peru's combined exports of agricultural and fishery products totaled $700 million in 1990. These exports consisted primarily of fishmeal and fish oil, canned and frozen fish, coffee, and cotton.

Trade policy and prospects

The Government has liberalized imports and reduced import tariffs in an effort to reduce price rises and keep inflation under control.

To encourage greater use of native crops, such as potatoes, the Government requires wheat mills to use a minimum percentage of domestic grains and crops to be eligible for imported wheat supplies. This proportion was set at 10 percent in 1988 and is to increase gradually to 70 percent in 1997. However, this requirement is not being enforced.

Peru has two state buying agencies that handle nearly all imports of wheat and wheat flour, and a portion of imports of rice, sugar, feed grains, soybeans, soybean products, and dairy products. Purchases generally are on an invitation-to-bid tender basis.

The Government looks to the export sector to stimulate economic growth, but the exchange rate, which reflects Government efforts to control inflation, is maintained at a level unfavorable to exports. ■

Philippines

P

Profile of agriculture

Agriculture continues to be the most important sector of the Philippine economy in terms of income, ahead of both manufacturing and services. Agriculture employs, directly or indirectly, about 40 percent of the 25-million-person labor force. It contributed an estimated 27 percent of the gross domestic product in 1990.

Agriculture in the Philippines is concentrated on 10 of the country's more than 7,000 islands, led by Luzon and Mindanao. Arable agricultural land accounts for 30 to 40 percent of the total land area of 300,000 square kilometers.

The latest agricultural census (1980) counted 3.4 million farms, of which 96 percent were less than 25 acres. Of the estimated 32 million acres harvested in 1989, 30 percent was dedicated to corn, rice, and coconuts. Philippine agriculture is largely dependent on monsoon rains, which normally occur during the June-November period.

Crops accounted for roughly 80 percent of the value of 1989 agricultural production, with dairy, livestock, and poultry making up the rest.

Four of the country's top 10 exports are agricultural products—coconut oil, shrimp/prawns, bananas, and sugar. Together, these four products brought in an estimated 11 percent of the country's total 1990 export income.

Agricultural Production

	1989	*1990*
	mil. metric tons	
Crop production[1]		
Bananas	3.19	3.16
Cassava	1.85	1.86
Copra	1.90	2.15
Corn	4.50	4.60
Pineapple	1.62	1.61
Rice, rough	8.90	9.40
Sugar	1.75	1.80
	mil. head	
Livestock numbers[2]		
Cattle and buffalo	4.5	4.4
Chickens, total	65.9	68.2
Ducks	6.5	7.3
Goats	2.2	2.2
Hogs	7.9	8.0
	thous. metric tons	
Animal product output		
Beef and veal	132	138
Eggs		
Chicken	155	164
Duck	29	30
Goat meat	57	55
Pork	615	665
Poultry meat	263	276

[1] *Calendar years, except July-June for corn and rough rice, October-September for copra, and September-August for sugar.*
[2] *As of January 1 of each year.*

Production highlights

Agriculture's performance in 1990 was affected by a serious drought during the first part of the year, followed by a major earthquake in July, and a "super typhoon" in November. The negative effects of the natural disasters were exacerbated by rising input, labor, and fuel costs.

Rice, the mainstay of the diet and the country's leading crop, accounted for roughly one-fifth of the total value of agricultural production in 1989. For 1990/91 (July-June), rice output is forecast to increase 5-10 percent from the drought-damaged 1989/90 level, when imports were a record 575,000 tons.

Higher rice yields, however, are constrained by low or inefficient use of fertilizers. At the same time, a per capita consumption rate of about 100 kilograms a year and a population growth rate of 2.3 percent a year will make it difficult for production to meet demand in the medium term.

Drought also reduced 1989/90 (October-September) corn output and resulted in a record 475,000 metric tons of imports. The 1990/91 crop is expected to be a record-large 4.6 million tons, which will reduce import needs.

The swine and poultry industries continued to enjoy a high growth rate in 1989, with the value of production 17 percent higher than in 1988. Expansion continued in 1990.

Both coconut products and sugar experienced significant value gains in 1989 in response to relatively high world prices. For coconut products,

The Philippines at a Glance

Population (1990): 66.1 million
Urban population: 40-45%
Population growth rate: 2.3%
Per capita income (1990 est.): $764
Total land area: 300,000 square kilometers, 30-40% agricultural
Major crops: Rice, corn, coconuts, sugarcane, bananas, pineapples, coffee, tobacco, mangoes
Livestock sector: Swine, poultry, aquaculture
Leading agricultural exports: Coconut oil, bananas, fresh and processed pineapple, sugar, coffee
Leading agricultural imports: Dairy products, wheat, soybean meal, rice, cotton, tobacco, corn
Agricultural imports as share of total imports: 10-11%
U.S. share of total agricultural imports: 25-30%
Percent of labor force in agriculture (1989): 42%
Membership in economic or trade organizations: ASEAN, Cairns, GATT

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beverages	20.6	6
Corn	50.0	12
Cotton, raw	78.1	67
Dairy products	251.5	1
Essential oils	42.8	39
Fruits and vegetables	47.9	37
Rice	120.0	0
Rubber	23.7	11
Soybean meal	126.6	40
Tobacco	63.8	38
Wheat, milling	209.2	72
All agricultural products[2]	1,269.2	26

[1] *Values are shown in U.S. dollars at U.S.$1 = 28 pesos. Includes commercial and concessional imports.*
[2] *Includes products not listed. Excludes forestry and fishery products.*

however, 1990 brought lower income, despite larger exports, due to depressed world prices. Sugarcane production expanded in 1990 due to strong domestic prices and the larger U.S. sugar quota. The U.S. quota helped insulate Philippine sugar exports from falling world prices during the latter part of 1990.

Farm and food policy

In 1990, the Government of the Philippines maintained its policy of stimulating production of major commodities through a mix of direct intervention in the marketplace and support for exports. The Government's agricultural policy emphasized crop diversification, assistance to small-scale farmers, stronger conservation measures, improved infrastructure, tariff reform, and land reform.

The Comprehensive Agricultural Reform Program (CARP) continued to be implemented in stages throughout 1990. This program resulted from 1988 legislation designed to redistribute large properties among tenant farmers and farm workers. Under the 10-year CARP, individually owned agricultural landholdings are limited to 5 hectares (12.4 acres).

The Government intervenes in rice and corn production due to the national importance of these crops in terms of both employment and consumption needs. Through the National Food Authority (NFA), the Government attempts to support and stabilize rice and corn market prices by buying farmers' production at fixed prices during harvest periods. The NFA also sells its rice and corn stocks at fixed prices as a means of stabilizing consumer prices.

To assist agricultural growth, the Government has focused on programs to raise yields, especially rice and corn yields. The largest programs involve irrigation and fertilizers. The objectives are to stimulate efficiency and to supply small-scale farmers and cooperatives with lower cost inputs.

Imports and exports

Agricultural trade by the Philippines was fairly evenly balanced in 1990, with sales of $1.2 billion and purchases of $1.3 billion. The agricultural trade deficit of slightly less than $100 million in 1990 stood in sharp contrast to an overall trade deficit of about $3.6 billion.

While export volumes of coconut products, primarily coconut oil and copra meal, recovered dramatically in 1990, weak world prices prevented a corresponding increase in export value. Exports of bananas and processed pineapple products posted declines largely due to reduced production and lower exportable supplies.

Coffee exports suffered the worst, as the suspension of the International Coffee Organization export quotas brought world coffee prices plunging to levels below prevailing local prices.

Sugar was one of the few traditional Philippine exports that enjoyed some growth in 1990, mostly due to the increased U.S. import quota. The United States continues to be the only market for Philippine raw sugar and remains the largest market for Philippine coconut oil, processed pineapple, and coffee.

Philippine agricultural imports grew by nearly 13 percent in 1990, primarily the result of record purchases of wheat, soybean meal, rice, and cotton, and near-record imports of corn. The United States recovered lost market share for cotton as the result of more competitive prices, and for soybean meal and wheat with the help of U.S. Government export assistance and credit programs.

Despite these gains, the U.S. share of total agricultural commodity imports by the Philippines declined to 26 percent in 1990.

Trade policy and prospects

As part of the Government's ongoing program to liberalize imports, nontariff barriers to many high-value food imports were significantly lowered in 1989.

At the same time, the Government restricts imports of rice and corn by controlling import licensing. The NFA is the sole importer of rice and is an important corn importer.

As a member of the Cairns Group, the Philippine Government has supported efforts to reform global agricultural trade rules under the General Agreement on Tariffs and Trade (GATT). This includes support for minimal trade restrictions. On the other hand, the Government continues to use phytosanitary measures to protect domestic production from import competition. ■

Poland

P

Profile of agriculture

Poland's agricultural sector employs more than one-fourth of the country's labor force and accounts for about 13 percent of national income. The sector is dominated by private farms.

These private farms—numbering 2.1 million—supply about 75 percent of Poland's agricultural production. The remaining 25 percent comes from over 5,000 socialized farms (2,600 state farms and 2,500 collective farms).

Most private farms are small, averaging around 6 hectares and producing both crops and livestock.

Poland's principal grain crops are rye, wheat, barley, oats, and triticale, which together occupy over 50 percent of the total cultivated land area. Potatoes, rapeseed, and sugar beets occupy almost 20 percent of cultivated farmland. Other important crops are pulses, berries, fruits, vegetables, hay, and silage.

Hogs lead in livestock numbers, followed by cattle, sheep, and horses. Pork accounts for about 60 percent of total meat output. Poultry production is also important, providing about 13 percent of meat output.

The farm sector is able to meet most or all of the national demand for wheat, feed grains, vegetable oils, potatoes, sugar, meat, butter, cheese, and eggs. Major agricultural deficiencies include high-protein feedstuffs, high-quality wheat, corn, rice, and cotton.

Swine inventories have been expanded to satisfy the growing demand for meat, but production is limited by low use of high-protein feeds and corn. A short growing season, poor soils, limited use of farm chemicals, and the small size of private farms are major obstacles to increased feed grain production.

Overall agricultural progress is impeded by the inefficiency of both state farms and small private farms. In general, small private farms are ill-equipped in terms of machinery and technology; about half of these farms still use horses for farm work. Soaring input prices have lowered farm incomes and reduced the propensity to expand agricultural output.

Agricultural Production

	1989	*1990*
	mil. metric tons	
Crop production		
Barley	3.9	4.1
Hay	13.9	14.5
Oats	2.2	2.1
Potatoes	34.4	36.3
Rapeseed	1.6	1.2
Rye	6.2	6.0
Sugar beets	14.4	16.5
Triticale	2.4	2.7
Wheat	8.5	8.6
	mil. head	
Livestock numbers[1]		
Cattle	10.3	9.0
Cows	5.0	4.7
Other	5.3	4.3
Hogs	18.7	19.7
Piglets	11.4	12.6
Porkers	5.5	5.1
Sows	1.8	2.0
Horses	1.0	0.9
Poultry, layers	4.6	4.0
Sheep	4.2	3.9

[1] *As of December 31 each year.*

Production highlights

Agricultural production rose 1.5 percent in 1989, thanks to record grain and rapeseed crops. In 1990, grain production reached a new high of 28.0 million tons, but output of rapeseed, milk, and fruits declined, resulting in little change in total agricultural output from the 1989 level.

Good 1990 feed supplies and the favorable relationship between feed prices and hog procurement prices induced Polish swine farmers to boost hog inventories during 1990. However, cattle numbers continued to decline due to lower milk profits and low beef prices.

Poland at a Glance

Population (1990): 38.1 million
Urban population: 60%
Population growth rate: 0.4%
Per capita income (1989): $2,153
Total land area: 304,510 square kilometers; 46% arable, 13% meadows and pasture, 28% forest and woodland
Major crops: Rye, wheat, barley, oats, triticale, potatoes, hay, rapeseed, sugar beets, fruits, vegetables
Livestock sector: Hogs, cattle (dual-purpose), sheep, poultry, horses
Leading agricultural exports: Meats (including canned ham and pork shoulders), casein, slaughter cattle (including calves and horses), processed fruits and vegetables, rapeseed
Leading agricultural imports: Oilseed meals, cotton, wheat, cattle hides, cotton, coffee beans, tea, wine, citrus
Agricultural imports as a share of total imports: Slightly over 10%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 26%

Farm and food policy

Except for a small amount of Government assistance for crop and livestock research, Poland's agricultural

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cattle hides	68	9
Coffee and tea	64	0
Cotton	129	16
Feed grains	62	4
Meat	84	0
Oilcake and meal	246	0
Vegetable fats, edible	68	0
Wheat	133	6
Wool	55	0
Other	721	3
All agricultural products	1,628	4

[1] *Values are shown in U.S. dollars at U.S.$1=1,446 zlotys. Includes commercial and concessional imports.*

sector—both private and state— generally operates under market-oriented principles. One other exception to its free-market policy is the Agricultural Market Agency, which receives state funds to make intervention purchases of a wide range of agricultural products to maintain stable prices.

Although three-quarters of Poland's raw agricultural output is produced by private farmers, roughly 70 to 80 percent of the country's food processing industry and over 50 percent of the retail food outlets are owned by the state.

Along with its marketization policy, the Government has developed an antimonopoly program aimed at privatizing existing state-controlled industries and food outlets. Noticeable progress in privatization was achieved in 1990. Whereas in 1989 only 5 to 10 percent of meat was sold through private outlets, such sales in 1990 had risen to 25 to 30 percent.

Through price and trade reform, virtually all food products, both basic and exotic, are widely available in Polish cities and villages. However, purchasing power is still quite low for the average Polish consumer, meaning that even some basic food products are often considered luxury items. For example, a kilogram of sausage costs about 2 percent of the average wage earner's monthly salary.

Imports and exports

Less than 10 percent of Polish foreign trade is agricultural. Principal imports are protein feeds, cotton, and wheat. Major agricultural exports are livestock, livestock products, fruits, and vegetables.

To help facilitate Poland's transition from a centrally planned to a market-type economy, several nations (in particular, the United States and the European Community) provided large amounts of agricultural commodity assistance to Poland in 1990. Commodity assistance offered from the United States amounted to $145 million, while the EC provided about $150 million.

Poland's commercial imports of grain fell significantly in 1990, and protein meal imports also were down. The declines were attributed to the record 1990 Polish grain harvest, as well as prevailing low domestic grain prices. Large grain donations to Poland also helped reduce commercial purchases.

Imports of high-value food products have grown at a relatively fast pace. As prices for some Polish food products reached or even exceeded world market levels, imported products became more competitive. For example, Danish canned ham, French milk, and Finnish eggs are competing with local substitutes. The outlook for sales of high-value products is expected to remain bright for the foreseeable future.

Poland's 1990 exports of slaughter sheep decreased slightly, while exports of cattle increased somewhat. Sales of meat products—particularly canned ham and pork shoulders to the U.S. market—dropped by 20 percent due to higher Polish procurement prices. Exports of Polish fruits and vegetables increased markedly in 1990.

Trade policy and prospects

The Polish Government supports a free-trade policy. There are little or no export controls. With the exception of health and sanitary regulations, there are few restrictions on agricultural imports.

Current tariffs for agricultural and food commodities are relatively low. They vary from zero for grains, feedstuffs, and oils to 5 to 10 percent for meat products, and 10 to 20 percent for dairy products and fruits and vegetables.

However, the Government is preparing a new tariff policy that may raise average tariffs to 10 to 20 percent ad valorem. Meat and dairy products probably will carry the highest rates. In addition, the Government is developing an anti-dumping program that will place heavy restrictions on imports of highly subsidized agricultural products.

In January 1991, the Polish Government imposed a licensing policy on imports of alcoholic beverages (including wine). At about the same time, the Prime Minister announced that Poland was prepared to restrict the flow of subsidized imported products that have an adverse effect on domestic producers.

The outlook for Polish agricultural imports depends on the development of the Polish economy and the level of debt relief. Poland is burdened with a large foreign debt and a repayment program that absorbs a growing percentage of its hard currency export earnings. ■

Portugal

P

Profile of agriculture

Agriculture's role in the Portuguese economy has been on a steady decline. In 1990, agriculture accounted for less than 6 percent of the country's gross domestic product and employed 18 percent of the workers. Nevertheless, that 18-percent share was one of the highest for a member country of the European Community (EC).

Portuguese agriculture is hampered by a number of restraints. Only about half the land currently being cultivated is suitable for commercial agriculture. Eighty-four percent of the farms are smaller than 5 hectares, which may be scattered among several parcels. A low technological level and an aged, often poorly educated agricultural population are other constraints. These factors tend to increase Portugal's dependence on food imports.

The agricultural profile is essentially Mediterranean, but there is a marked difference between the south, with its larger farms specializing in grain production, and the more temperate north, where small-scale mixed farming predominates.

Crop production accounts for 44 percent of total agricultural output, with wine, olive oil, and grains the most important products. The dominant livestock activities (which together account for the remaining 56 percent of agricultural output) are milk, pork, poultry meat, and eggs.

Agricultural Production

	1989	*1990*[1]
	thous. metric tons	
Crop production		
Apples	80	75
Corn	674	650
Olives[2]	219	204
Oranges	91	75
Potatoes	1,044	1,057
Tomatoes for crushing	639	716
Wheat	605	268
Wine grapes[2]	7,748	9,840
	thous. head	
Livestock numbers		
Cattle	1,330	1,271
Beef	201	205
Dairy	389	400
Hogs	2,247	2,023
Poultry		
Broilers[3]	118	124
Layers[3]	6	9
Sheep	3,024	3,051
	thous. metric tons	
Animal product output		
Beef and veal	123	123
Butter	12	13
Cheese	55	56
Eggs[4]	132	138
Milk		
Cow	1,420	1,480
Goat	10	11
Pork	216	218
Poultry meat	207	210

[1] *Estimated.*
[2] *Thousand hectoliters.*
[3] *Poultry in millions.*
[4] *Million dozen.*

Production highlights

Production has been rising steadily in recent years, mostly because of an expanding livestock sector. Total agricultural output rose over 10 percent in 1989 and continued its upward trend in 1990. The potential for further yield improvement in extensive arable crop production is balanced by the expectation that significant acreage will go out of production over the next 5 years.

Heavy rains and floods late in 1989 meant a bad start for the 1990 crop year. Most affected was wheat, as significant areas were either not planted or were flooded. However, better weather during the rest of 1990 permitted a partial recovery. In fact, wine production was so far above demand that it became necessary to dispose of lower quality types.

Portugal at a Glance

Population (1990): 9.8 million
Urban population: 33%
Population growth rate: 1.0%
Per capita income (1989): $3,798
Total land area: 88,930 square kilometers; 48% agricultural
Major crops: Wine grapes, olives, grains, potatoes, tomatoes
Livestock sector: Cattle, hogs, poultry, sheep
Leading agricultural exports: Wine, cork, wood, tomato paste
Leading agricultural imports: Hides and skins, raw cotton, soybeans, wool, sugar, sunflowerseed, manioc, corn gluten feed, coffee, corn
Agricultural imports as share of total imports: 16% (including wood)
U.S. share of total agricultural imports: 13% (including wood)
Percent of labor force in agriculture: 18%
Membership in economic or trade organizations: EC, GATT, OECD

Among irrigated crops, corn stands out: stimulated by attractive prices and high yields, it has surpassed wheat as the leading grain. Another success story is processing tomatoes, which are profitably produced for export as paste. On the other hand, rice, a regionally important crop, faces competition from imports on the basis of price and quality.

The livestock sector expanded significantly in both 1989 and 1990. In the beef sector, after a sizable 1989 expansion, total domestic output began to

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Barley	17	12
Beef	81	0
Coffee	69	0
Corn	72	99
Corn gluten feed	82	100
Cotton	259	5
Hides and skins	346	3
Manioc	85	0
Pork	68	0
Soybeans	201	44
Sugar	138	0
Sunflowerseed	112	0
Wool	156	0
All agricultural products[2]	2,961	13

[1] *Values are shown in U.S. dollars at U.S.$1= 157.5 escudos.*
[2] *Includes wood products.*

decline in mid-1990, with rising imports meeting the growing domestic demand. Beef is considered to be the livestock sector most vulnerable to competition from imports.

The dairy sector expanded in 1989 and 1990 because of an increase in the number of dairy cows, but even more because of improved technology. Dairying is considered the livestock sector with the best prospects in the medium term, as the EC-set production quota of 1.9 million metric tons provides this sector with an estimated 20-percent margin for expansion.

The hog sector had the highest expansion rate among all meat sectors in 1990. Poultry evidenced only a modest rate of increase and is expected to remain stable. Sheep production is less important than the numbers indicate; production is extensive and slaughter weights quite low.

Farm and food policy

Since it joined the EC in 1986, Portugal's policy goals have emphasized aligning its agricultural programs with those of the EC. During this transition process, which Portugal is being permitted to undertake in two stages spread over 10 years, emphasis has been put on farm modernization and infrastructure development.

The EC is cofinancing a 10-year investment program aimed at narrowing the development gap between Portugal and its EC counterparts. The Portuguese Government also has an investment program to support more competitive activities, such as fruits and vegetables, flowers, bees, native bovines, sheep and goats for the production of regional cheeses, native *Alentejano* pigs, and a series of alternative crops.

When full EC accession is completed, an estimated 75 to 80 percent of Portugal's agricultural units are expected to become unprofitable—a trend that will particularly affect grain crops. These areas could be partially converted to fruits and vegetables, given improvements in quality and marketing, as well as to other less traditional crops such as pulses.

Another alternative is forestry to supply the increasing demand for pulp. Ultimately, however, some land is destined to be abandoned.

Since joining the EC, the Portuguese Government's role in the market has been decreasing. Price formation has been liberalized and state import monopolies have been abolished. Grain and oilseeds are now imported directly by private importers.

Imports and exports

Portugal is a net agricultural importer, with purchases totaling $3 billion in 1989, versus agricultural exports of $1.7 billion.

Total agricultural imports rose 39 percent in value in 1989 and are expected to continue on an upward trend in the near future. Dominant imports continue to be grains, soybeans, and miscellaneous feed preparations (such as corn gluten feed, citrus pulp, and manioc), which together account for about 60 percent of total agricultural imports in terms of volume (including wood).

Portugal also has been importing increasing quantities of high-value products, including fruit, vegetables, and even olive oil and wines. This trend toward diversification will continue, given rising incomes.

Agricultural imports from the United States (including wood) rose in 1989, although the U.S. market share decreased. Major items continued to be grains, feed preparations, and soybeans. Wheat, hides, and skins increased in both volume and value, and soybeans recovered market share.

Portugal's agricultural exports are relatively minor, with the exception of wood, wine, and tomato paste. About 7 percent of Portugal's agricultural exports went to the United States in 1989.

Trade policy and prospects

Membership in the EC has brought about an adjustment of Portugal's highly protected and subsidized trade policy to the EC's system of import levies and duties applicable to most agricultural products. As the transition has progressed, the Portuguese market has been increasingly supplied by other EC countries.

Ultimately, virtually all barriers to intra-EC trade will be lifted, while trade with non-EC countries will become subject to EC trade policy. This change could mean that the United States will lose the Portuguese market for products where the EC has developed a surplus, especially grains. ■

Romania

R

Profile of agriculture

Romania is a major agricultural producer in Eastern Europe. Nearly 30 percent of the gross national product comes from agriculture—mainly from grain, oilseed, sugar beet, and livestock production.

Romania's agriculture over past decades was highly organized into large industrial units that were part of the command economy centrally controlled by the Communist Government. Private agriculture, mostly in hilly and mountainous regions, was confined to less than 15 percent of the farmland. However, with the dramatic changes since the December 1989 revolution, the prospects for private agriculture have greatly improved.

Up to 60 percent of the arable land in 1990 was under the jurisdiction of private households, comprising more than 2 million people. However, the transition in 1990 from established state agricultural structures to private commercial farm businesses proved difficult, with little substantive action.

Farmworkers gained rights to till agricultural plots of up to one-half hectare, but this land was not deeded. In fact, most of this land remained communal property, and workers simply obtained an average yield from larger fields. The major change in agriculture during 1990 was the right of private households to retain all of their production and to sell on open-air markets at free-market prices.

Around 30 percent of the workforce is employed on farms. Agricultural workers are largely older, since the younger generations have flocked to the cities in search of better jobs and living conditions. Adding to agricultural labor problems, farmworkers lacked access to specialized training under the established centralized command system. This condition currently inhibits progress in establishing commercially viable farm units.

Agricultural Production

	1989/90	*1990/91*
	thous. metric tons	
Crop production		
Barley	3,436	2,680
Corn	6,762	6,810
Grapes	915	954
Potatoes	3,892	2,852
Soybeans	304	141
Sunflowers	656	556
Vegetables	3,462	2,225
Wheat	7,900	7,300
	mil. head	
Livestock numbers[1]		
Cattle	6.3	6.0
Cows/heifers	2.5	2.1
Private	2.1	2.5
Poultry	110.0	95.0
Swine	11.7	13.9
Sows/gilts	1.0	1.0
Private	3.3	4.6
Sheep	15.4	15.0
Private	7.2	8.7
	1989	*1990*
	thous. metric tons	
Animal product output		
Butter	45	32.8
Cheese	77	91.3
Eggs[2]	3,800	5,000
Meat	1,200	1,600
Milk[3]	2,600	2,800

[1] *Semiofficial animal inventories as of January 1, 1990, and November 1, 1990.*
[2] *Million eggs.*
[3] *Million hectoliters.*

Production highlights

The hopes of early 1990—that an "unbound" agricultural sector would quickly provide abundant harvests to meet the population's food and fiber needs—were not realized. Persistent drought was a major factor in reducing summer crop output, but other transitional factors also dashed expectations that private farmers would fill grocery store shelves.

Among the transitional factors in 1990 were the preoccupation with unfolding political developments, reduced workforce discipline, the absence of forced harvest brigades, and a preference to work on private plots at the expense of communal fields. Compounding these new conditions were continued problems with timely deliveries and applications of fertilizers, chemicals, animal drugs, and so forth.

Romania at a Glance

Population (1990): 23.2 million
Urban population: 55%
Population growth rate: 0%
Per capita income (1990 est.): $2,500
Total land area: 237,500 square kilometers; 63% agricultural, 25% cereals
Major crops: Corn, wheat, barley, sunflower, fruits, vegetables, sugar beets, forage crops
Livestock sector: Swine, poultry, sheep, cattle
Leading agricultural exports: Meat, corn and wheat, eggs, cheese, vegetables, fruits, wine
Leading agricultural imports: Soybeans, cotton, sugar, oil, corn, barley, hides and skins
Agricultural imports as a share of total imports: About 10%
U.S. share of total agricultural imports: About 6%
Percent of labor force in agriculture: 31%

Winter grain output in 1990 fell somewhat from the previous year, with wheat production down nearly 8 percent to 7.3 million metric tons and barley down 22 percent to 2.7 million tons. State procurement of winter grains dropped even more sharply as cooperative and state farm members elected to hold the commodities privately as "payment in kind" for their labors.

Corn is widely considered the favorite crop, since private households can easily identify their portion of the field, store the ears on farm, and use the grain to produce their own livestock products. Romanian officials place 1990/91 corn production at 6.8 million tons, up slightly from the year before. Officials note the difficulty in obtaining accurate figures given the growth in private holdings and the unwillingness to give information to central authorities.

Production of industrial crops (oilseeds, sugar beets, flax and hemp, and tobacco) dropped sharply in 1990, mostly due to lower incentives to produce and resulting declines in planted area. Vegetable and potato production also fell sharply. Potato output totaled only 2.9 million metric tons, compared with 3.9 million in 1989; vegetable production was 2.2 million tons, down from 3.5 million in 1989.

Farm and food policy

In the 1980's, Romania's agriculture was organized in inefficient state cooperatives, starved of inputs and centrally controlled. Recent agricultural reforms aim at gradual privatization of the farm economy, revitalizing the farm sector, and increasing domestic food supplies.

Major changes occurred in Romania's agricultural policy in 1990 under the theme of privatization. The return of small plots to agricultural workers and the allowance of free price formation for private products on farmers' markets signaled a dramatic reversal from the highly planned economy under the previous regime.

Private agriculture remains somewhat difficult to define in Romania due to the lack of sufficient infrastructure to serve potential producers. The hilly and mountainous regions do appear to be more aggressive in implementing privatization of commercial farms. Passage of legislation in early 1991 regulating the return of land to agricultural workers should increase private holdings, but this will depend on the final provisions.

Agriculture received high priority in the first months of 1990, particularly through increased imports of food and animal fodder and industrial inputs for agriculture. Increased supplies of food (both commercial purchases and humanitarian assistance) were a welcome sight for consumers. In spite of larger supplies, rationing was soon resumed in order to promote more equitable distribution.

Imports and exports

After the December 1989 revolution, Romania threw open its long-closed doors to agricultural imports. A wide range of food products, animal fodder, and other agriculturally related products were imported in 1990, although detailed trade statistics have yet to be published. At the same time, Romania closed its borders to agricultural exports in an effort to provide better supplies for its population.

Imports of U.S. agricultural commodities jumped sharply by August 1990 to nearly $200 million, compared with $40 million a year earlier. The largest commodities in terms of value were corn, soybeans, hides and skins, and cotton. Meat products also were exported to Romania for the first time.

Romania traditionally has been a net agricultural exporter. However, due to its immediate food and fodder needs, Romania likely will not be a sizable exporter in the near term. The speed at which Romania will return to being a net exporter will depend on its success in reorganizing its agricultural input and output markets, and on its ability to provide real price incentives for producers.

Trade policy and prospects

During the 1980's, Romania pursued a strict austerity program to repay accumulated hard currency debt. It also severely restricted imports to maintain a trade surplus. As a result, agricultural imports from the West largely were limited to products that were used to generate hard currency earnings.

However, having successfully repaid its debt, Romania has undertaken a fairly widespread reorganization of its foreign trade.

Since early 1990, farm products have been imported freely in order to improve the food supply situation. The former foreign trade organizations have lost their monopoly on foreign trade and are gradually being transformed into diversified commercial enterprises. Small private companies have increased in number and appear to present healthy competition. Exporters are allowed to retain up to 30 percent of their hard currency earnings.

Despite these reforms, Romanian foreign trade still is handled largely by Government agencies, and a high level of barter exists for many products. Currency inconvertibility, hard currency shortages, and Government influence over trade continue to pose barriers to imports from the West. ■

Saudi Arabia

S

Profile of agriculture

The Kingdom of Saudi Arabia occupies about four-fifths of the Arabian Peninsula. The country is almost entirely desert, with an arid climate subject to great extremes of temperature.

From time immemorial, the Saudi economy was based mostly on subsistence agriculture, mainly date culture and animal production. However, during the last 20 years, the wealth generated from oil has been used for rapid modernization, ambitious industrial development plans, and serious, though very costly, efforts to expand agriculture.

Wheat is the Kingdom's biggest crop in terms of land area and production. The country achieved self-sufficiency in wheat in 1984/85 and, since 1986, has become a net exporter. Exports in 1990/91 are projected at 2 million tons, making Saudi Arabia the world's sixth largest wheat exporter.

Saudi Arabia is the world's largest producer of dates. The country also produces a wide range of vegetables and fruits using modern technologies such as drip irrigation systems and climate-controlled greenhouses.

Cattle production is dominated by dairy farming, which is one of the better developed agricultural sectors, and the country is now self-sufficient in fresh milk. Sheep raising and fattening is a growing agricultural activity, and local production meets about 50 percent of demand.

The poultry industry is highly modernized, and Saudi Arabia is a net exporter of about 10 percent of its table egg production to neighboring Gulf states. Domestic broiler production is continuing to expand from the present 40- to 50-percent level of self-sufficiency.

Farming is a major source of income for about 15 percent of the labor force, and agriculture's share of the gross domestic product in 1989 reached about 8 percent. Agricultural exports accounted for 1.5 percent of total exports in 1989.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Date palm	500	502
Fruits	290	300
Grains		
Barley	300	450
Sorghum	81	81
Wheat	3,200	3,600
Vegetables and melons	1,987	2,000
	thous. head	
Livestock numbers		
Camels	397	389
Cattle		
Beef	44	47
Dairy	152	151
Goats	3,357	3,353
Poultry		
Broilers[1]	240	263
Layers[1]	7	8
Sheep	6,652	6,131
	thous. metric tons	
Animal product output		
Beef and veal	15	16
Eggs[2]	233	242
Milk		
Cow	200	220
Camel	3	3
Goat	5	5
Mutton	58	60
Poultry meat	240	263

[1] *Poultry in millions.*
[2] *Million dozen.*

Production highlights

Prospects for agricultural output in 1991 are generally good. Wheat and barley production is expected to be slightly higher than in 1990. Prospects for horticultural and forage crops also are up because of the continuing Government policy of issuing licenses for new production units.

Dairy production is expected to level off or only slightly increase in 1991 as the Kingdom surpasses self-sufficiency in fresh milk. Domestic production of red meat, mainly mutton, is expected to increase by 2 to 4 percent as new production projects

Saudi Arabia at a Glance

Population (1990): 11.4 million
Urban population: 60%
Population growth rate: 3.7%
Per capita income (1989): $7,500
Total land area: 2.3 million square kilometers; 1% crop use, 40% grazing
Major crops: Wheat, date palms, vegetables
Livestock sector: Poultry, dairy, camels, sheep, goats
Leading agricultural exports: Wheat, table eggs, dates
Leading agricultural imports: Sheep, barley, poultry meat, dairy products, rice, soybean meal, corn, seeds, beef, mutton, tobacco products
Agricultural imports as a percentage of total imports: 18%
U.S. share of total agricultural imports: 12%
Percent of labor force in agriculture: 15%
Membership in economic or trade organizations: Arab League, Arab Monetary Fund, GCC, IBRD, IDA, IDB, IFC, IMF, IWC, OAPEC, OPEC

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animals, live	475	2
Barley	160	20
Dairy products	474	[2]
Food preparations	180	18
Fruits	287	10
Meat and edible offal	385	10
Rice	190	7
Tea, coffee, and related products	193	5
Tobacco and products	304	51
Vegetable oils	108	30
Wood and products	356	4
All agricultural products[3]	4,091	12

[1] *Values are shown in U.S. dollars at U.S.$1=3.75 riyals.*
[2] *Less than 1 percent.*
[3] *Includes products not listed.*

become operational. Camel and goat numbers are expected to go down as Bedouins settle on new agricultural projects and gradually move to modern agriculture.

Production of poultry meat and table eggs will continue to increase due to favorable prices and Government policy.

Farm and food policy

Food security has been a major goal of the Saudi Government since the beginning of its agricultural development process in the mid-1970's. The Government has supported the agricultural production sector by giving both direct and indirect subsidies, which include the following:

- Free land to farmers and agricultural companies, up to 400 hectares per investor.
- Interest-free and easy-term loans.
- Subsidies on farm machinery and fertilizers, reaching up to 50 percent of the cost.
- Substantial supports, including guaranteed producer prices, for major crops such as wheat, barley, and dates; these supports have been a major factor in boosting domestic agriculture.
- Payments of $13.30 for every good quality date palm seedling.
- Imposition of higher than normal tariffs on table eggs, broiler meat, and dairy products to protect and promote domestic production. "Infant" industries are protected by a 20-percent duty, compared to the normal rate of 12 percent on dutiable products.
- Free control of plant and animal diseases.
- Full refund of the cost of transporting dairy cattle by air from abroad.

Agricultural production is handled by the private sector. The Government's role centers on policymaking, defining objectives, and supporting private enterprise. In spite of the marked increases, agricultural production has not kept pace with overall food demand. Food imports continue to fill the gap, and Government efforts are continuing to reduce the dependence on imported agricultural products, especially food.

The Saudi Government is now moving toward diversification and expansion of its food industry.

Imports and exports

During 1985-89, Saudi agricultural imports leveled off at around $3.8 billion, nearly a fifth of the total value of the Kingdom's imports. In 1990, the value of agricultural imports probably increased by 5 to 6 percent due to the presence of thousands of Kuwaitis and the multinational armed forces.

The United States has enjoyed 10- to 12-percent share of the total value of Saudi agricultural imports. The United States is the biggest supplier of food and agricultural commodities. Saudi imports from the United States exceeded $490 million in 1990.

Saudi agricultural exports include wheat, table eggs, dairy products, fish, livestock, animal and poultry feed, fresh vegetables, fruits, ornamental plants, and date palm seedlings. In 1989, the total value of these exports was $418 million.

Wheat was the major item, with a 57-percent share. Most of the Saudi exports are destined for neighboring Gulf Cooperation Council (GCC) and Arab League countries.

Trade policy and prospects

Except for wheat and barley, which are handled by the Government, trade in agricultural products is handled by the private sector.

With a few exceptions, there are no price controls, prior licensing, or regulations to control imports or exports. Foreign firms must have a native citizen as a sponsor and partner. Most imports are handled by a few key importers because of their financial and handling capabilities.

Trade restrictions include tariffs that can reach 20 percent on some items, such as table eggs, poultry meat, and cooking oil.

Duty-free items include beef and mutton (chilled or frozen), green coffee (fresh, not roasted), sugar, rice, tea, barley, sorghum, cardamom, live camels, live sheep, and soybean meal. All other commodities are subject to a general import duty of 12 percent ad valorem.

An increasingly significant set of product quality, labeling, and shelf-life standards has been developed by the Saudi Arabian Standards Organization. Saudi officials strictly enforce these standards.

Imports of pork and pork products, alcoholic beverages, and products containing alcohol are prohibited. ■

Senegal

S

Profile of agriculture

Agriculture, including fishing, plays a dominant role in Senegal's economy. It employs around 70 percent of the labor force, a much larger portion than its one-fifth share of the gross national product would indicate.

Most of Senegal falls within the Sahel zone, with irregular and inadequate rainfall and generally poor soils. With only limited amounts of irrigated land, the heavy dependence on dryland cultivation results in wide swings in production.

Senegal's leading cash crop is peanuts, which occupy almost two-fifths of the cultivated land. Peanuts are processed into oil and meal for export. The oil milling industry accounts for about 12 percent of total industrial output.

Coarse grain production, including millet, corn, and sorghum, is primarily consumed as food in rural areas. Only a small percentage is sold commercially, which means that people living in Dakar (the capital) and other major cities must rely upon imported rice and wheat as dietary staples. Senegal must import over 500,000 tons of wheat and rice annually to supply urban demand.

The country faces a growing problem with soil degradation in the peanut basin, the major agricultural region east of Dakar. Farmers use practically all crop vegetation produced each year for food, fodder, and fuel. As a result, the organic material in the soil is being depleted, and soil fertility is declining.

Fertilizer use has also been declining as the Government has phased out fertilizer subsidies. Farmers caught in a squeeze between rising costs and falling commodity prices have tended to resort to subsistence production. Population pressure on the land is growing, and the availability of new land to bring under cultivation is limited.

The livestock feeding sector in Senegal consists of only a handful of modern poultry farms. Growth in the consumption of poultry meat and eggs is constrained by low incomes and the availability of less expensive fish landed along the coast. Because the country is predominantly Moslem, the swine industry is practically nonexistent.

Fishing is a major industry in Senegal. The major portion of the fish catch is landed by small-scale operators who provide fish to the domestic market. The industrial fishing sector is geared to export and includes both Senegalese vessels and those of foreign companies operating under license. Including processing and marketing, some 130,000 Senegalese work in the fishing sector. The total sustainable catch is estimated at about 420,000 metric tons annually.

Agricultural Production

	1989/90	*1990/91*
	thous. metric tons	
Crop production[1]		
Cassava	59	70
Corn	131	145
Cottonseed	29	35
Millet	639	506
Peanuts	815	670
Rice	168	175
Sorghum	127	159

[1] *Crop years are July-June.*

Production highlights

In years of favorable rainfall, the country produces close to a million tons of the basic staples, millet and sorghum. However, in dry years, production reaches only a third to a half of that level. These two commodities supply about two-thirds of the calories in rural diets.

Unfavorable weather caused overall agricultural production in Senegal to fall in 1990/91. Peanut production declined 18 percent as sharply lower yields more than offset a larger planted area. The increase in peanut area was at the expense of millet. Peanuts and millet compete for land with farmers shifting between the cash crop, peanuts, and the subsistence crop, millet.

Millet output declined in 1990/91 as area fell by 88,000 hectares and yields dropped by about 12 percent. Sorghum, rice, and corn production rose as area increases were more than sufficient to offset the adverse growing conditions.

Senegal at a Glance

Population (1989): 7.3 million
Urban population: 35%
Population growth rate: 3%
Per capita income (1989): $480
Total land area: 196,000 square kilometers; 10-15% cropped
Major crops: Peanuts, millet, rice, sorghum, corn, cotton
Livestock sector: Fish, poultry, sheep
Leading agricultural exports: Fish, peanuts and products, cotton, vegetables
Leading agricultural imports: Rice, wheat
Agricultural imports as a share of total imports: 25-30%
U.S. share of total agricultural imports: 10-15%
Percent of labor force in agriculture: 70%
Membership in economic or trade organizations: ACP, ECOWAS, GATT, IBRD, IMF

Farm and food policy

The Government of Senegal's long-term objective for the agricultural sector is to attain food self-sufficiency, while promoting increased production of export crops. The Government has traditionally played a major role in directing the country's agriculture, providing extension and advisory services to farmers, setting producer prices of key commercial crops, exercising monopoly purchasing power for a number of crops, and distributing all agricultural inputs on credit.

However, increasing financial difficulties, coupled with the deterioration of the country's agricultural sector, caused a shift in Government policy during the 1980's. Since the middle of the decade, the Government has been attempting to reduce its intervention in the rural economy and has transferred more responsibility to farmer organizations and the private sector.

The four fundamental goals of this policy are:

- To reform the cooperative system so as to leave most decisions regarding production, storage, and distribution to farmers;
- To reduce the role of rural development agencies;
- To strengthen the input supply system; and
- To pursue appropriate pricing policies—in particular, shifting consumer prices so as to encourage domestic cereal production.

The state's role has been somewhat reduced through the elimination of input subsidies and credit programs, the removal of support prices on coarse grains, and the liberalization of domestic grain markets. However, the Government retains its role in extension, advisory, and research services, in holding security stocks of seed and grains, and in regulating the market for oilseeds.

Peanuts have always received special attention from the Government. The country's state-associated oil milling company has had a monopoly on selling peanuts and selling the oil and meal on domestic and foreign markets. However, in line with the new agricultural policy, millers now are free to make their own marketing arrangements, and private brokers and traders are authorized to buy peanuts directly from farmers and sell them to the mills.

The Government also has intervened heavily in rice production. Now, however, in order to reduce the Government's operating deficit, farmers have been made responsible for the costs of land preparation and maintenance. The producer price of paddy rice has been increased to provide more incentives. The Government has set its purchase price, ex-mill, at $593 per metric ton.

Despite this heavy subsidy, efforts to increase rice output in the Senegal River Valley have been frustrated by the high cost of preparing land for irrigation, and also by a serious border dispute with Mauritania, Senegal's northern neighbor.

The Government requires its price control agency to manage a 60,000-ton security stockpile of rice.

Imports and exports

Exports of fish, including canned fish, totaled $155 million, or about 30 percent of the export earnings in 1988. Sales of crude peanut oil and cake, at about $137 million in 1988, represented about 25 percent of total export earnings.

Imports of food products account for about one-fourth of Senegal's total imports. Even in the best of years, Senegal falls far short of meeting its requirements for rice and wheat to supply the urban population. Wheat imports are primarily milled into flour for baking French-style bread. Consumers generally prefer 100-percent broken rice to prepare the national dish of fish and rice.

The United States exported $37.1 million worth of agricultural products to Senegal in 1989, including $29.1 million worth of rice—much of it made available under U.S. Government export credit guarantee programs.

Trade policy and prospects

Even while seeking to increase rice production, the Government still depends on rice imports for a significant portion of its revenue. The Government is the sole importer of rice for general consumption. It usually buys 100-percent broken rice and resells it at the wholesale price of about $470 a ton, which is far above world market prices. Some of the profit covers the losses incurred from buying domestically produced rice at even higher prices.

The Government has ended most of its quantitative restrictions on imports. However, it still maintains some quantitative restrictions on imports of rice and sugar, and requires licenses for imports of packaged rice.

Imports are subject to a flat duty of 15 percent, a fiscal duty at rates ranging between zero and 98 percent, and a value-added tax at 7 or 30 percent.

Exports of peanut oil and meal are subject to export taxes of 20 and 10 percent, respectively. ■

Sierra Leone

S

Sierra Leone at a Glance

Population (1990): 4.1 million
Population growth rate: 2.6%
Per capita income (1988): $250
Total land area: 71,620 square kilometers; 25% arable, 29% forest and woodland
Major crops: Rice, corn, cassava, cocoa, peanuts, coffee, tobacco
Livestock sector: Poultry, sheep, fish, swine
Leading agricultural exports: Cocoa, coffee, tobacco, ginger
Leading agricultural imports: Rice, wheat and wheat flour, sugar, powdered milk
Agricultural imports as a share of total imports: 30-35%
U.S. share of total agricultural imports: 10-15%
Percent of population in agriculture: 65%
Membership in economic or trade organizations: ECOWAS, GATT, IBRD, IMF

Profile of agriculture

Agriculture is the most important sector of the economy, contributing roughly two-fifths of the gross domestic product and employing two-thirds of the labor force.

Subsistence farming dominates, with rice, the most important staple food crop, grown by about four out of every five farmers. Rice farming, which is indigenous in swamps and coastal areas, remains mostly subsistence because of the lack of inputs and capital investment.

Labor is also in short supply because of the greater appeal of cash wages paid in the diamond fields. Domestic production of rice meets about three-fourths of domestic requirements. Rice supplies over 50 percent of total calories in rural diets.

Other important food crops are corn, cassava, and peanuts. The most important export crops are cocoa and coffee.

The livestock sector remains underdeveloped due to weak consumer purchasing power, limited production of feed, and relatively high production costs. Only poultry and pigs are raised commercially, with production centered around Freetown, the nation's capital on the Atlantic Coast. The quality of parent stock is a major problem. Feed scarcity reflects the higher returns to farmers from selling corn on the cob for human consumption. Labor shortages limit corn production.

Sierra Leone's waters are rich in fish and shellfish. A Soviet fishing fleet has fished the waters regularly for many years, sharing 15 percent of its catch with the local company, Sierra Fisheries. The latter also has an operating fleet of 12 boats, including eight shrimpers. Smaller local and mixed fleets have also existed. The shrimp and some lobster generally are shipped to Europe.

Production highlights

Sierra Leone's main crop, as well as the mainstay of the national diet, is rice. Rice is grown in a variety of ways in Sierra Leone. In addition to the traditional slash-and-burn technique, farmers grow rice in inland swamps, on river flood plains, on coastal tidal flats, and on what are called the "Boli Lands."

Swamp culture is essentially a form of irrigation. Swampy areas are cleared and water control structures built to regulate water depth during the rainy season. Over a third of Sierra Leone's rice crop is grown this way. In the south, rice is grown between the estuaries of two large rivers. The fertile alluvial soil boosts yields.

Sierra Leone was once a net rice exporter, but subsidized imports in the 1970's and early 1980's proved a disincentive to production. Rice production now falls short of national consumption by roughly 25 percent, or 100,000 tons.

Rice production in 1989 was estimated at 310,000 metric tons, down 7 percent from 1988. However, output probably increased in 1990 and 1991, reflecting an expansion in planted area and higher yields. The Government's effort to privatize rice imports without subsidies has eliminated much of the wild swings in domestic prices of the past. The higher domestic farm prices as a result of the liberalization of the rice market have encouraged farmers to plant more rice and use more inputs to boost yields.

However, high transport costs, lack of adequate storage capacity, the high cost of agricultural inputs, and stiff competition from low-cost Asian suppliers continue to make the Government's goal of self-sufficiency in rice difficult to achieve.

Coffee production in 1989 declined to 92,000 tons, down from 110,000 tons the previous year, due to unfavorable weather, low international prices, and lack of buying activity on the part of the Sierra Leone Produce Marketing Board. In 1989, a shortage of currency complicated buying by the Produce Marketing Board and may have hurt recorded exports.

Cocoa production varies widely from year to year, with weather a key factor determining output. Poor weather during the growing season cut 1989 cocoa output from the previous year's level.

Sierra Leone produces about 600 tons of tobacco, largely dark fire-cured with small amounts of flue-cured. Production is concentrated in the northern part of the country in the areas of Makeni and Kabala.

The Government has banned the possession, sale, and smoking of foreign cigarettes as a means of reducing the smuggling of tobacco products. The ban is intended to increased budgetary receipts from domestically produced tobacco products. Reportedly the ban on imports has boosted consumption of domestic cigarettes by 70 percent. Total consumption, estimated at about 1.5 billion cigarettes, is not believed to be growing very fast because of weak consumer purchasing power.

The national sheep herd was estimated at 320,000 head as of February 1990 and is largely herded by the Fulani tribes in the northern part of the country. The poultry industry produces about 600,000 birds a year, largely in the Freetown area.

Farm and food policy

Sierra Leone's foremost farm problem is to feed a rapidly growing population at affordable prices. Food is the largest single expenditure facing consumers, accounting for more than 40 percent of the cost of living for urban consumers.

Little progress has been made on the 1986 "Green Revolution" Plan, a Government initiative to achieve food self-sufficiency within 3 years. One of the main production problems is the absence of a land tenuring policy. The lack of such a policy has kept some of the most fertile land in Sierra Leone out of production.

The Government of Sierra Leone, through its Ministry of Agriculture, helps farmers by subsidizing the plowing, harrowing, and seeding of their land. The Government has a monopoly on imports of fertilizer, and it supplies fertilizer to farmers at subsidized prices.

Imports and exports

Sierra Leone is a net agricultural importer, with purchases of $91 million in 1988 versus sales of $38 million.

Despite the Government's efforts to increase rice production, imports have been rising in recent years. Imports were 99,000 tons in 1989, 110,000 tons in 1990, and are projected at 115,000 tons in 1991. The import and marketing of rice has been conducted through private commercial channels since August 1988.

Wheat and wheat flour imports, at 30,000 tons in 1989, have not changed much in the past few years.

U.S. agricultural exports to Sierra Leone consist primarily of U.S. Government-assisted shipments of rice and wheat and donations of flour, vegetable oil, and powdered milk. U.S. exports were valued at $7 million in 1988, consisting of $4.6 million in grains, $1.2 million in vegetable oil, and $800,000 in livestock, dairy, and poultry.

Crops grown for export include coffee, cocoa, and palm kernels.

Sierra Leone's coffee exports totaled 4,700 tons in 1989. Exports in recent years have averaged about 9,600 tons annually, but there have been wide swings due to the impact of weather on production. In 1989, exports may have been hurt by a currency shortage, which complicated buying. All coffee exported has to be prepared for export by the Sierra Leone Produce Marketing Board.

Cocoa exports totaled 8,000 tons in 1989, versus an average of 7,000 tons over the past decade. Exports rose slightly as the liberalization of the market has resulted in greater production for export. However, Sierra Leone now has its own cocoa processing plant, which produces cocoa powder for both domestic consumption and export. As a consequence, its unprocessed cocoa exports have fallen off in the past 2 years.

Trade policy and prospects

After years of a gradually deteriorating economy, Sierra Leone has begun taking steps towards economic reform. Measures taken include the introduction of a flexible exchange rate, the elimination of export and import licenses, the adoption of a new customs system and tighter controls on Government spending, and the signing of several agreements with foreign investors.

By removing export taxes, the Government's 1989 budget provided assistance to increase exports of nontraditional crops such as palm kernels, kola nuts, ginger, piassava, cashews, and peanuts.

In the past, Sierra Leone's economic problems have left only a small market for U.S. products. The situation is changing, however, as U.S. goods become more competitive and have an excellent reputation for quality. Processed foods are in demand.

A budding tourist industry may offer some potential for larger processed food imports in the future. With the best swimming beaches in West Africa, Sierra Leone has a small but growing tourist trade. Most of the tourists are French and come in package tours to the major hotels. Both hotel capacity and airline services are increasing, so the long-term outlook for tourism is positive. ■

Singapore

Singapore at a Glance

Population (1990): 2.7 million
Urban population: 100%
Population growth rate: 1.5%
Per capita income (1990): $12,656
Total land area: 625 square kilometers; 2% agricultural
Major crops: Vegetables
Livestock sector: Poultry, eggs
Leading agricultural exports: Wood products, coffee, spices, edible vegetable and animal oils, fruits and vegetables, beverages
Leading agricultural imports: Fruits, vegetables, wood products, coffee, spices, fish and fish preparations, beverages, grains, cereal products, edible vegetable and animal oils, meat and meat preparations, dairy products
Agricultural imports as a share of total imports: 6%
U.S. share of total agricultural imports: 6%
Percent of labor force in agriculture: 0.4%
Membership in economic and trade organizations: APEC, ASEAN, GATT

S

Profile of agriculture

Over the last decade, rapid industrialization and the development of new public housing have encroached on farmland. The number of farms in Singapore decreased from 2,075 in 1988 to 1,187 in 1989, with total farming area declining by 40 percent to 1,195 hectares. This trend has been abetted by the Government, which intends that scarce land resources be put to more intensive uses.

Major constraints to large-scale farming are Singapore's lack of land (land area totals only 625 square kilometers), lack of water supplies, and infertile soils.

Less than 3 percent of Singapore's total area is farmland. The only significant agricultural activities are poultry raising and the production of chicken eggs.

Singapore produces 15 to 20 percent of its poultry requirements and about 55 percent of its egg consumption. Despite its small size, the country exported about $35 million worth of ornamental fish and about $12 million worth of cut flowers, principally orchids, in 1989.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Vegetables	6	5
	mil. head	
Livestock numbers		
Broiler hens	4.0	4.0
Ducks	5.0	5.0
	mil. dozen	
Animal product output		
Eggs	27	35

Production highlights

In 1989, the total output of the farm sector was valued at an estimated $182 million. This total consisted of 4.3 million chickens, 5.3 million ducks, 323 million eggs, 6,400 tons of vegetables, and 441,000 pigs (the raising of which was terminated in November 1990).

Farm and food policy

With land and water in short supply, the Government has decided to promote high-tech, nonpollutive farming. Toward this end, 10 agrotechnology parks totaling 2,000 hectares are being planned and developed. Farm lots of between 2 and 20 hectares will be leased to the private sector for periods of 20 years.

Intensive agricultural activities being encouraged include shrimp farming, ornamental fish farming, and high-value vegetable and ornamental plant production. Private-sector investment is encouraged in research facilities for genetic selection in aquaculture, biologics and animal vaccines, pig and cattle embryo transfers, and seed genetics and plant development. The aim is to develop the agrotechnology parks into regional research and service centers for neighboring ASEAN countries.

The Government wants to achieve production levels that meet the following percentages of total domestic consumption: poultry, 15 percent; eggs, 87 percent; ducks, 87 percent; and vegetables and fish, 20 percent.

Imports and exports

Singapore imported an estimated $3.3 billion in agricultural products from a wide range of countries in 1990. The U.S. share of agricultural imports was $212 million, or 6 percent of the total.

A major agricultural import category was fresh fruits and vegetables, valued at $569 million in 1990. The bulk of these and other agricultural imports come from neighboring tropical countries. Other major imports in 1990 included wood products, coffee and spices, grains and cereal preparations, animal oils, and eggs and dairy products.

As Singapore is a major trading nation and serves as a trade center for much of Southeast Asia, most im-

Value of Agricultural Imports, 1989/90

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Beverages	256	2
Coffee and spices	336	2
Dairy products and eggs	185	2
Fish and preparations	318	0
Fruits and vegetables	569	16
Grains and preparations	232	6
Meats and preparations	185	23
Vegetable oil, processed	186	1
Wood products	381	2
All agricultural products[2]	5,325	6

[1] *Values are shown in U.S. dollars at U.S.$1=1.94 Singapore dollars.*
[2] *Includes forest products and other items not listed.*

ported agricultural products are not retained for the small domestic market. Hence, Singapore's import trends reflect the demand for products in the re-export markets of Malaysia, Indonesia, and other Southeast Asian nations.

As Singapore is not an agricultural producer, practically all of its exports originate in other countries. In 1990, it is estimated that Singapore exported about $2.6 billion worth of agricultural products. Major exports included wood products, coffee, spices, vegetables, and beverages. An estimated $191 million of agricultural products went to the United States.

Trade policy and prospects

Singapore is a strong advocate of free trade and free trading practices. Any restrictions on trade would hinder its large re-export trade. Except for tobacco, alcoholic beverages, and sugar-based confectionery, practically all agricultural products enter and leave Singapore free. Health certificates are required for livestock and all products containing meat. Singapore also has strict regulations on additives, packaging, and labeling.

Domestically, the Government encourages food imports from as many competing sources as possible, thereby allowing the local population to benefit from competitively priced food supplies from all over the world.

Despite the lack of trade barriers, there are several factors to keep in mind when considering the Singapore market. The population is 76 percent Chinese, 15 percent Malay, and 8 percent Indian. Although changes are occurring, especially among young people, local traditions, tastes, and eating habits still dominate the food market.

Traditionally, Singapore imports most of its high-value products from the European Community, Australia, and China. U.S. high-value products with a sizable position in the Singapore market include frozen chicken parts, fresh and canned fruits, and food and beverage concentrations/preparations for the food manufacturing industry.

With Singapore's rising income levels and the fast expansion of the tourist trade, U.S. export opportunities lie in the high-value products complex—including snack foods; confectionery; new-to-the-market, ready-to-eat meals; beverages; and processed meats.

Singapore is a member of ASEAN, the six-nation group that includes Malaysia, Indonesia, Brunei, the Philippines, and Thailand. Recently there has been a shift in this group's emphasis from the political arena toward closer economic cooperation within ASEAN, as well as between ASEAN members and a looser grouping of East Asian economies. ■

South Africa

S

Profile of agriculture

In climate and topography, South Africa is a land of extremes. Conditions vary from desert to subtropical rain forests; from floods to severe drought; from rain and snow to heat waves; from barren sand dunes to deep fertile soils. However, it is this very diversity in climate and topography that enables South Africa to produce almost every kind of crop.

The country has two agricultures. One is a modern, technologically advanced, diversified, commercial sector producing a wide variety of market-oriented products. The other is a large subsistence agricultural sector, which has not been as successful to date but is receiving increased attention from development agencies.

Exports normally account for more than 30 percent of the value of agricultural production. Weather conditions can wreak havoc, however, with droughts especially affecting the grain industry.

The sugar and fruit export industries are not affected as much by weather, as these crops are grown in areas with better rainfall or produced under irrigation.

Agricultural Production

	1988/89	*1989/90*
	thous. metric tons	
Crop production[1]		
Avocados	41	51
Bananas	195	229
Citrus	750	920
Corn	12,384	9,442
Cotton lint	66	60
Deciduous fruit	774	843
Grapes	1,497	1,548
Pineapples	252	203
Potatoes	1,259	1,257
Sorghum	462	283
Sugarcane	18,636	19,236
Sunflowerseed	409	520
Tobacco	34	28
Tomatoes	488	489
Wheat	2,003	1,927

	1989	*1990*
	mil. head	
Livestock numbers[2]		
Cattle	12.9	13.1
Goats	5.8	5.7
Hogs	1.7	1.7
Sheep	32.6	33.0

	1988/89	*1989/90*
	thous. metric tons	
Animal product output[3]		
Beef and veal	576	628
Butter	16	17
Cheese	40	43
Eggs[4]	341	347
Milk	252	250
Mutton and lamb	175	188
Pork	114	124
Poultry meat	545	563
Wool	95	105

[1] *Production seasons vary.*
[2] *As of August each year.*
[3] *July-June.*
[4] *Million dozen.*

Production highlights

The gross value of South Africa's agricultural production increased by 2 percent in 1989/90 to $7.4 billion, mainly because of increased producer prices.

As a result of bad weather, corn production fell from 12.4 million tons in 1988/89 to 9.4 million in 1989/90, while wheat production declined from 2 million metric tons to 1.9 million. Cotton, tobacco, and sorghum production also decreased.

In contrast, sugarcane and sunflowerseed production was up, and the fruit industry had a record year in terms of both production and export income. Numbers of livestock and the nation's animal product output increased in 1989/90.

South Africa at a Glance

Population (1990): 39.5 million
Urban population: 60%
Population growth rate: 2.7%
Per capita income: $2,380
Total land area: 1.2 million square kilometers; 11% crops, 82% natural pastures, 7% timber and other
Major crops: Corn, sugar, wheat, deciduous fruits, citrus, subtropical fruits, oilseeds, cotton, tobacco
Livestock sector: Beef cattle, poultry, sheep (wool), dairy cattle, goats (mohair)
Leading agricultural exports: Corn, wool, sugar, canned and dried fruits, juices, deciduous fruits, citrus
Leading agricultural imports: Rice, vegetable oils, barley malt, oilseed meals, natural rubber, coffee, tallow, poultry meat, seeds, tea, cotton
Agricultural imports as a share of total imports: 4%
U.S. share of total agricultural imports: 7%
Percent of labor force in agriculture: 30%
Membership in economic or trade organizations: GATT, IMF, Southern African Customs Union

Farm and food policy

Food self-sufficiency used to be the mainstay of agricultural policy, but it is now becoming less important in light of the realities of the international marketplace.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Barley malt	42.3	0
Coffee	21.0	0
Cotton	11.8	51
Poultry meat	15.5	7
Rice	92.2	32
Seeds	13.0	46
Tallow	17.6	6
Tea	13.0	0
Vegetable meals	42.1	0
Vegetable oils	83.6	2
Others[2]	407.9	27
All agricultural products[3]	760.0	7

[1] *Values are shown in U.S. dollars at U.S.$1=2.61 rand.*
[2] *Includes a wide variety of further processed products.*
[3] *Excludes forest products.*

The nature of crop production in South Africa is such that large surpluses are occasionally produced that must be exported at a loss. Providing stable, guaranteed prices and adequate marketing infrastructure to support production were major policy objectives. The Government subsidized farmers' inputs, credit, marketing, and infrastructure, while it supported producer prices.

Recently, however, the emphasis has shifted to market-related production and effective competition. The main reason for the shift was the high cost of the previous system. The latest trend in setting producer prices is to allow market forces to play a role.

For instance, in the wheat and corn industries, producer prices are based on expected earnings in the local and export markets. There is also a Government-sponsored program to convert mainly unsuitable cropland to permanent pasture.

The Government is still involved in agricultural marketing, however. The Control Board system remains in use, although there are moves toward privatization in this field. At present, there are 21 agricultural control boards constituted under the Marketing Act. In 1989, about 67 percent of the total value of agricultural production was marketed in terms of the control measures of these boards. Approximately 11 percent of all agricultural products were marketed in terms of other legislation. No Government control was exercised over the marketing of the remaining 22 percent of agricultural products.

South Africa depends on the international market for the sale of a large portion of its products, but the Government is unable to finance participation in some of the highly subsidized markets. Any international moves to limit subsidies will thus have a positive effect on the agricultural sector, which explains South Africa's support for agricultural trade reform under the GATT.

Imports and exports

South Africa exported agricultural products valued at $2.2 billion in 1989 and imported agricultural products worth $760 million. Major exports included corn ($357 million); wool ($351 million); sugar ($274 million); fresh ($157 million) and processed ($157 million) deciduous fruits; and fresh citrus ($153 million).

The country regularly imports rice, vegetable oils and oilseed meals, seeds, and tropical products such as rubber, tea, and coffee. It also imports substantial amounts of cereals in times of drought.

For example, the wheat industry shifted from an exporter in 1990 to an importer in 1991. The turnabout was mainly the result of a very dry, hot spring and an early summer, from September to December 1990, with no widespread rains until January 1991.

Likewise, in 1989 and 1990, South Africa probably exported a total of more than 3 million tons of corn, but early 1991 indications were that imports of about 2 million tons would be needed during the year. Adverse weather caused the area planted to corn in 1991 to fall to about 2.6 million hectares, down from 3.5 million in 1990.

South Africa also has a major forestry industry based on plantation production, which leads to substantial trade in timber products.

Trade policy and prospects

The South African Government has stated its intention to comply with the GATT requirements for agricultural trade. Compliance will entail moving away from the traditional quantitative import control system toward an import levy system, which has already been done with oilseed meals.

At present, however, South Africa still requires import permits and imposes import surcharges to protect its balance of payments, which is under pressure from debt obligations as well as the trade sanctions against the country.

Import permits are required for a host of products ranging from dried fruits to wool to glazed cherries to alcoholic beverages. In general, the granting of import permits is relatively easy. The low value of the South Africa currency, especially against the U.S. dollar, is a greater hindrance to imports.

Most imports are subject to a general sales tax of 13 percent, which is also applied on domestic goods. Starting in October 1991, the general sales tax is going to be replaced by a value-added tax of 12 percent. ■

Soviet Union

S

Profile of agriculture

The Soviet Union is the world's largest producer of wheat, potatoes, sugar beets, sunflowerseed, and milk. Although domestic production of many products is sizable, the country is a major importer of grain, sugar, meat, soybean meal, wool, and butter.

Grain imports accounted for 19 percent of world grain trade in the 1989/90 marketing year. Cotton and forest products are the major agricultural exports; others include furs, fish, and beverages.

Approximately 19 percent of the labor force is involved in agriculture, generating about one-fifth of the country's gross national product.

Agricultural production is hampered by difficult climatic conditions, characterized by a short growing season in the north and barely adequate moisture levels in the south. A large zone of rich, black soil, however, produces good harvests when the weather is favorable.

State and collective farms, leased land, and private plots make up Soviet agriculture, with state farms holding slightly more than half of arable lands. Less than 1 percent of total arable land has been under cultivation by individual farmers, but their holdings are beginning to increase.

Agricultural Production

	1988	*1989*
	mil. metric tons	
Crop production		
Barley	44.5	48.5
Corn	16.0	15.3
Cotton (seed)	8.7	8.6
Cotton (lint)	2.8	2.7
Fruits and berries	8.9	9.7
Oats	15.3	16.8
Potatoes	62.7	72.2
Rice	2.9	2.6
Rye	18.5	20.0
Sugar beets	88.0	97.4
Sunflowerseed	6.2	7.1
Tobacco	0.3	0.2
Vegetables	29.3	28.7
Wheat	84.4	92.3

	1989	*1990*
	mil. head	
Livestock numbers		
All cattle	119.6	118.4
Cows	41.8	41.7
Hogs	78.1	79.0
Horses	5.9	5.9
Poultry	1,199.5	1,213.9
Sheep and goats	147.5	145.4

	1988	*1989*
	mil. metric tons	
Animal product output		
Beef and veal	8.6	8.8
Eggs[1]	85.2	84.9
Lamb and mutton	1.0	1.0
Milk	106.8	108.5
Pork	6.6	6.7
Poultry meat	3.2	3.4
Wool[2]	478.0	479.2

[1] *Billion eggs.*
[2] *Thousand metric tons.*

Production highlights

The 1989 grain crop was reported at 211 million tons, 16 million above the previous year's harvest. The cotton crop recovered from a late frost and turned out 2.7 million tons of lint cotton. The replanting of frost-damaged acreage resulted in a decrease in extra-long staple cotton production. There was a slight drop in vegetable production in 1989 compared with the preceding 3 years.

Livestock farms recorded slight increases in output, but struggled against input shortages (mainly short supplies of balanced feed). Dairy herds were culled further as farmers tried to eliminate the poorly producing cows and make better use of limited feed. Average yearly yield per cow was around 6,000 pounds of milk.

Soviet Union at a Glance

Population (1990): 288.6 million
Urban population: 66%
Population growth: 0.8%
Per capita income: $4,800
Total land area: 22.3 million square kilometers; 10% arable, 17% meadows and pasture, 41% forest and woodlands, 32% other
Major crops: Grain (wheat, barley, oats, rye), sugar beets, potatoes, cotton, sunflowerseed, fruit, vegetables, flax, tobacco
Livestock sector: Beef and dairy cattle, hogs, poultry, sheep, goats
Agricultural exports: Forest products, cotton, fish, furs, beverages
Agricultural imports: Grain (wheat, corn, barley), sugar, meat, soybean meal, wool, vegetable oil, butter, leather
Agricultural imports as a share of total imports: 16-18%
U.S. share of total agricultural imports: 15%
Percent of labor force in agriculture: 19%
Membership in economic and trade organizations: CEMA

Farm and food policy

Strengthening the nation's agricultural sector continues to be the focus of economic planning by the Soviet Government. Developing and expanding the relatively primitive internal marketing and distribution network for farm goods have been identified as high priorities. Recent localized deficits of certain food products around the country were blamed largely on

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Barley	455	0
Butter	435	0
Coffee, cocoa, tea	1,153	0
Corn	2,368	91
Edible and industrial fats[2]	261	11
Fruits and berries[3]	695	0
Livestock and products	2,433	0
Nuts	127	21
Rice	232	0
Soybeans[4]	270	42
Sugar	4,855	0
Tobacco and products[5]	1,592	0
Vegetable oil, edible	538	0
Vegetables[3]	353	0
Wheat	2,367	37
Wool	992	0
All agricultural products[6]	20,000	15

[1] *Values shown in U.S. dollars at U.S.$1=0.6* rubles.
[2] *Tallow.*
[3] *Fresh and processed.*
[4] *The United States exported about $545 million worth of soybeans, which is not included in this amount.*
[5] *Includes cigarettes.*
[6] *Includes products not listed.*

inefficient internal distribution and processing, rather than on low farm production.

Land reform topped the agenda of agricultural policy issues in 1990. An all-union land law that permits individual lifetime tenure was passed and is to be implemented by the governments of the republics.

The Russian Republic, which is the country's largest, held a special session of the Congress of Peoples' Deputies to focus on the question of land reform. For the first time in 70 years, private land ownership in the Russian Republic, albeit with caveats, was approved, opening the door for individual, family-farm operations. Losses in the food production-processing-distribution network are large.

Imports and exports

The Soviet Union is one of the world's largest agricultural importers, with purchases approaching $20 billion in 1989.

Sugar, wheat, and corn were the leading individual commodities imported in 1989, accounting for half the total value of agricultural imports. Grains, meat, sugar, soybean meal, and butter were the leading farm imports in 1990. The United States supplied substantial quantities of these products, except for sugar.

Forest products and cotton were major exports from the Soviet Union, generating $5.4 billion in 1989. Although cotton is an extremely important earner of foreign exchange, there are strong internal pressures to cut back acreage to allow production of food and forage crops to increase, as well as to improve soil conservation practices.

Trade policy and prospects

The longstanding policy of channeling trade through central monopoly Foreign Trade Organizations (FTO's) appears to be relaxing somewhat to allow some agricultural trade directly between the Soviet end-user and the overseas seller. However, bulk agricultural commodity trading remains predominantly in the hands of the FTO's.

The Soviet Union will continue to be a deficit producer of grains and oilseeds, making it a major purchaser of feed grains, soybean meal, and vegetable oil.

Interest in importing livestock and livestock genetics seems to be growing, bolstered by efforts to improve herd output and cut back on feed losses arising from poor breeding (i.e., poor feed conversion ratios and low milk yields).

Inputs for the food and farm sector are in great demand, including food processing and handling equipment, bulk storage facilities, small- and medium-sized farm implements, agricultural chemicals, and pharmaceuticals.

There are many obstacles to establishing a business in the Soviet Union. One major constraint facing U.S. exporters is the tight hard currency situation. The Soviet ruble is not convertible. Any available hard currency is spent in a strictly prioritized fashion. Although new policies are slowly opening the Soviet market for increased western trade, it is primarily for technology and capital equipment.

A major initiative on the part of the Soviets has been the creation of joint ventures in which a Soviet enterprise joins with a western partner to produce a commodity for both its domestic and third-country markets. A western partner will usually provide the technology, equipment, and expertise, while the Soviet partner will provide the land, facilities, and labor. Hard currency is to be earned through export, and the western partner's returns are usually to be earned from such sales.

Recent tallies indicate that roughly 2,000 joint ventures have been registered in the Soviet Union. ■

Spain

S

Profile of agriculture

Agriculture's contribution to Spain's overall economy is substantially less than it was a few years ago; nonetheless, agriculture still employs 12 percent of the country's population.

Although agricultural productivity has shown significant gains since Spain joined the European Community (EC) in 1986, it is still unable to compete with other nations in grain and livestock production.

Harsh terrain and limited rainfall have contributed to the traditionally low productivity of Spanish agriculture. Significant expansion of irrigation and other technological advances in recent years have resulted in considerable gains, but despite these efforts, Spanish agriculture still lags behind that of most other European countries.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Alfalfa	13,000	13,400
Almonds (unshelled)	320	200
Barley	9,100	9,400
Lemons	690	630
Olive oil	550	612
Oranges	2,370	2,480
Tangerines	1,080	1,490
Vegetables and melons	9,000	9,500
Wheat	5,200	4,700
Wine[1]	32,600	41,900
	mil. head	
Livestock numbers		
Cattle		
Beef	2.1	2.1
Dairy	3.1	3.2
Hogs	16.1	16.9
Poultry	534.0	520.0
Sheep	23.8	26.2

[1] *Thousand hectoliters.*

Production highlights

Agriculture had a normal year in 1990. Total agricultural output showed a marginal increase, and net farm income increased 3.6 percent over that of 1989.

Because of dry conditions, Spain's 1990 grain crop of 18.1 million tons was slightly smaller than average and 2.5 percent smaller than the 1989 crop. Barley production increased 3 percent to 9.4 million tons, and wheat production declined by 10 percent to 4.7 million tons.

Olive oil production in 1990, estimated at 612,000 tons, was 11 percent above the previous year because of favorable growing conditions.

Sunflowerseed output rose 44 percent to 1.3 million tons as a result of a sharp increase in acreage.

Despite abnormally warm weather in the spring and early summer, Spain's citrus crop was up 11 percent to 4.6 million tons. The 1990 lemon crop was down 10 percent because of excessive rain during the blossoming period in key producing areas.

Spain's tobacco crop, at 41,090 tons (farm sales weight) in 1990, was 10 percent below the previous year's crop, because of a 15-percent reduction in total acreage, mainly in burley.

The area planted in cotton increased 20 percent in 1990 and, as a result, production rose 23 percent to 77,000 tons of lint cotton.

Good weather in 1990 resulted in an above-average wine crop of 41.9 million hectoliters, up 29 percent from the weather-reduced 1989 output.

Spain's 1990 almond crop was 33 percent below the previous year's, reflecting abnormally warm winter temperatures and frosts in March and April.

Lower feed prices and EC protection caused output of almost all types of animal products to increase in 1990. Production of lamb and goat meat rose 13 percent to 260,000 tons, and pork and beef output rose marginally to 1,730,300 and 455,000 tons, respectively.

Spain at a Glance

Population (1990): 39.4 million
Urban population: 70%
Population growth rate: 0.3%
Per capita income (1990): $12,442
Total land area: 504,750 square kilometers; 40% cultivated
Major crops: Grains, citrus, fruits, vegetables, wine grapes, olives
Livestock sector: Cattle, hogs, chickens, sheep
Leading agricultural exports: Fresh citrus, fresh vegetables, processed fruits and vegetables, fresh noncitrus fruit, wine, olive oil
Leading agricultural imports: Forest products, soybeans, hides and skins, soybean meal, coffee, meat, tobacco, corn
Agricultural imports as a share of total imports: 11%
U.S. share of total agricultural imports: 16%
Percent of labor force in agriculture: 12%
Membership in economic or trade organizations: EC, GATT, OECD

Farm and food policy

As a result of Spain's accession to the EC in 1986, decisionmaking on agricultural policy is increasingly being transferred away from the Spanish Ministry of Agriculture to the EC.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Corn	217	66
Corn germ meal	22	95
Corn gluten feed	73	100
Cotton	177	16
Forest products	947	14
Hides and skins	358	5
Peanuts	34	50
Rice	85	56
Sorghum	59	49
Soybean meal	320	5
Soybeans	586	60
Tobacco	309	60
Walnuts	30	97
All agricultural products[2]	7,659	16

[1] *Values are shown in U.S. dollars at U.S.$1=118.8 pesetas.*
[2] *Includes products not listed.*

During 1990, Spain continued to harmonize its agricultural policies with those of the EC. Most actions revolved around the modernization of farms and farm structures and irrigation of dryland areas. All policies are scheduled to match those of other EC countries by 1996. In some areas, such as grains, policies are already harmonized.

Imports and exports

Spain's balance of trade in agricultural products has steadily declined since its entry into the EC. Once a net exporter, Spain experienced an agricultural trade deficit of $1 billion in 1989: Exports of agricultural products declined to $6.6 billion, from $6.9 billion in 1988, while imports increased to a record $7.7 billion, from $6.9 billion in 1988.

Imports of forest products, pork, rice, sunflowerseed (mainly for crushing), dairy products, soybeans, and coffee showed the greatest increases.

The United States enjoyed its best agricultural trade year with Spain since 1986, with sales amounting to $1.25 billion in 1989. Spain was once again among the leading single-country markets for U.S. farm, food, and forestry products.

In 1989, Spanish purchases from the United States included 1.25 million tons of soybeans valued at $350 million, $184 million worth of tobacco, $144 million worth of corn, $128 million worth of forest products, and $73 million worth of corn gluten feed. The United States supplied all or virtually all of Spain's imports of corn gluten feed, corn germ meal, brewers' dregs, confectionery sunflowerseed, walnuts, almonds, and prunes.

Once again, in 1989, citrus fruit was Spain's most important agricultural export commodity in both volume and value. Exports totaled 2.3 million tons worth $1.2 billion—approximately 5 percent below 1988. At $231 million, olive oil exports were only half the 1988 level. In contrast, rice exports increased by 39 percent to $89 million in 1989.

Increases also were recorded in other leading export commodities, with processed fruit and vegetable shipments in 1989 valued at $774 million, noncitrus fruit valued at $576 million, wine at $563 million, and nuts at $134 million.

Trade policy and prospects

As agreed in the Treaty of Accession to the EC, Spain is required to eliminate customs duties on imports from other EC member countries by January 1, 1993. Duties are being reduced annually and will be completely eliminated by this date. Duties on imports from non-EC countries, as well as quantitative restrictions and other similar trade measures, also must be aligned with those of the EC by 1993.

The period during which other EC members are required to drop duties on agricultural imports from Spain is longer, depending on the commodity. Some duties and import restrictions, particularly for fruits and vegetables, will be in place through January 1, 1996. Spain will be completely integrated into the EC beginning in 1996.

The Treaty of Accession also required Spain to end its restrictions on sales of soybean oil into the domestic market as of January 1, 1991. This change is expected to increase the amount of soybean oil consumed in Spain.

In 1990, the EC agreed to a 1-year extension of the U.S.-EC Enlargement Agreement, under which Spain annually imports 2.3 million tons of corn, sorghum, and specified nongrain feed ingredients. The agreement was negotiated to compensate the United States for the loss of corn and sorghum exports to the Spanish market as a result of Spain's accession to the EC. ■

Sweden

S

Profile of agriculture

Agriculture is a highly productive enterprise in Sweden, despite the country's northern location and long winters. Although only 8 percent of the land area is cultivated, Sweden is more than 90 percent self-sufficient in agricultural production.

Agriculture contributes about 5 percent to the country's gross national product and employs 4 percent of the labor force. Farmers operate small but highly mechanized farms.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Barley	1,870	2,052
Oats	1,455	1,614
Potatoes	1,180	1,200
Rapeseed	367	374
Sugar beets	2,651	2,763
Wheat	1,750	2,200
	thous. head	
Livestock numbers[1]		
Cattle		
Beef cows	64	74
Calves	521	523
Dairy cows	569	576
Heifers, bulls	533	543
Hogs	2,263	2,203
Poultry	8,635	8,404
Sheep	400	402
	thous. metric tons	
Animal product output		
Beef and veal	137	144
Butter	70	74
Cheese	109	109
Eggs[2]	179	170
Milk, cow	3,509	3,521
Pork	304	289
Poultry meat	45	47

[1] *June estimates.*
[2] *Million dozen.*

Sweden's agriculture is focused on dairy products and meat, which together account for about 75 percent of total farm sales. Although cattle numbers have declined since the 1960's, higher yields have resulted in surplus milk. Sweden's grain yields also rank among the world's highest.

Production highlights

Production of most crops increased in both 1989 and 1990 as a result of unusually favorable weather.

Grain production increased 15 percent to 6.3 million tons in 1990, and the exportable surplus was estimated at nearly 2 million tons.

The rapeseed crop in 1990 reached a record 374,000 tons, up 2 percent from 1989 and up 50 percent from 1988.

Milk production showed little change in 1990, but is forecast to decline 6 percent in 1991 due to a Government milk reduction program, which provides for removal of some 55,000 cows from milk production. If all of these cows were slaughtered, beef production would increase by about 10,000 tons, most of which would likely be exported.

Farm and food policy

In 1990, the Swedish Parliament decided on a new food policy for the 1990's, called "The Agricultural Reform." The Government openly admitted that previous food policy legislation had failed to yield the intended results; that is, to keep farm incomes in line with those of comparable groups in society, to provide for sound management of resources from an environmental point of view, and to maintain reasonable food prices.

The main intent of The Agricultural Reform is to dismantle Sweden's agricultural price regulation system, beginning on July 1, 1991. The goal is to move toward a market-oriented system where demand directly influences agricultural production levels.

During a 5-year transition period, the adjustment of the agricultural sector to a freer market will be facilitated by a generous conversion program.

The Agricultural Reform also is considered as a first step on the road toward lower food prices. As a second step, intended to be implemented in the summer of 1991, border protection

Sweden at a Glance

Population (1989): 8.5 million
Urban population: 85%
Population growth rate: 0.1%
Per capita income (1990): $23,208
Total land area: 410,928 square kilometers; 60% forests, 8% crops
Major crops: Sugar beets, wheat, barley, oats, rapeseed
Livestock sector: Dairy cattle, hogs, poultry
Leading agricultural exports: Forest products, hides, beef and pork, grains, dairy products
Leading agricultural imports: Forest products, coffee, cheese, fresh fruits and vegetables, hides, table wines, soybean meal and oil
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: 6%
Percent of labor force in agriculture: 4%
Membership in economic or trade organizations: EFTA, GATT, OECD

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Almonds	21	86
Apples	49	10
Beef	42	19
Coffee	240	0
Forest products	1,623	3
Hides	58	2
Horses	37	68
Pears	23	35
Pork	30	23
Rice	19	53
Tobacco	38	53
Wines	115	4
All agricultural products[2]	4,661	6

[1] *Values are shown in U.S. dollars at U.S.$1=6.43 krona.*
[2] *Includes products not listed.*

(import levies) will be lowered. A third and last step will be to institute a stricter policy on competition, especially at the trade level.

Imports and exports

Sweden is a net agricultural exporter, with purchases totaling nearly $4.7 billion in 1989, versus exports of $11.0 billion.

Sweden's leading import category is forest products, totaling $1.6 billion in 1989. Paper and paper products account for about two-fifths of the forest product import total, followed by pulpwood, chips, and lumber with a one-third share.

Coffee was Sweden's second largest agricultural import in 1989, totaling $240 million, or roughly 5 percent of the import total. Table wines were also a significant import at $115 million.

Fruits were another large import item, with bananas, apples, tomatoes, and oranges reaching $78 million, $49 million, $54 million, and $40 million, respectively.

Sweden's agricultural imports (including forestry products) from the United States in 1989 were valued at $271 million, up $11 million from 1988. This represented approximately 6 percent of Sweden's total agricultural imports.

Sweden exported $11.0 billion in food and agricultural items (including forestry products, which totaled $9.8 billion) in 1989. About 3 percent of total food, agricultural, and forest product exports went to the United States—mainly oats, cheese, beef, and pork.

Sweden's grain exports in 1989 were valued at $200 million, up $10 million from 1988.

Dairy and egg exports in 1989 were valued at $50 million, down from $83 million in 1988.

Meat and meat product exports were up to $78 million, compared to $60 million in 1988.

Oilseed exports in 1989, at $7 million, were more than double the 1988 level.

Trade policy and prospects

Sweden maintains import tariffs, levies, and other restrictions to protect its agricultural producers and processors. These restraints protect commodities produced in Sweden, such as meats, dairy products, and grains.

Farm prices are set through a target price system, which is maintained by import levies and direct Government intervention. For dairy products, meat, poultry, eggs, potatoes, and potato starch, upper and lower wholesale price targets are set. Import levies can be raised or lowered when domestic prices move outside the target range.

Grain prices are protected by variable import levies, import licenses (mainly to limit wheat not suitable for baking), and export subsidies to dispose of surpluses. The same system, except for export subsidies, applies to sugar. Price support for oilseed production is financed by a levy on producers and on imports of all vegetable fats and oils. There are also subsidies in the form of regional aids and low-income support.

Although most tariffs are low, imports of some fruits and vegetables (those that are grown in Sweden) are subject to high seasonal tariffs.

Differences between domestic prices and export prices are covered by appropriated Government funds, funds derived from various fees and taxes imposed on farmers, or revenues from import levies on agricultural products. However, farmers pay 65 percent of grain export subsidies and virtually all of the export subsidies on livestock products. ■

Switzerland

S

Profile of agriculture

The Alps dominate the southern half of this small, mountainous, landlocked country. Forests and pastures, often on steep terrain, occupy about half the land. Intensive crop farming is limited to a few areas, and small-scale family farms are widespread.

The largest farm sector by far is dairy. Milk accounts for one-third of total farm output by value. Beef and pork production also accounts for a large share, followed by wine grapes, grains, poultry, fruits, and vegetables. Despite limited agricultural output, the country is roughly two-thirds self-sufficient in food production and completely self-sufficient in some commodities, such as dairy, bread wheat, pork, animal fats, and potatoes.

Agricultural Production

	1988	*1989*
	thous. metric tons	
Crop production		
Apples	416	198
Grains		
Bread	583	642
Feed	644	745
Potatoes	925	890
Rapeseed	50	54
Sugar beets	924	889
Wine grapes[1]	1,161	1,747
	thous. head	
Livestock numbers[2]		
Cattle		
Cows	798	806
Other	1,039	1,044
Goats	72	69
Hogs	1,941	1,869
Chickens		
Broilers	2,511	2,332
Layers	3,077	2,815
Growers	767	778
Other poultry	61	n.a.
Sheep	367	371
	thous. metric tons	
Animal product output		
Beef and veal	154	157
Butter	35	39
Cheese	130	133
Eggs[3]	706	692
Milk		
Cow	3,776	3,889
Sheep, goat, mare	21	19
Pork	279	280
Poultry meat	31	33
Sheep meat	4	4

[1] *Thousand hectoliters.*
[2] *April census.*
[3] *Million eggs.*

Production highlights

Growing conditions were favorable in 1989. As a result, the total value of agricultural output increased 5 percent to $5.9 billion. Output from the livestock sector was up 2 percent, reaching $4.4 billion. Crop output increased 13 percent.

Because of an unusually warm spring in 1989, vegetation and cattle grazing, as well as movement of cattle to the Alps, occurred earlier than usual. Quality of the hay, also cut early, was considered the best in 10 years. Second cuttings, however, were affected by dry weather.

Although potato acreage declined 2 percent to 19,000 hectares, good weather resulted in an ample supply for the domestic market and continued surpluses for animal feeding and flake production.

The 1989 vegetable harvest was characterized by good yields and low prices (by Swiss standards) for fresh produce. After the previous year's record harvest, production of vegetables for the preserving industry, mainly under fixed-price contracts, was lower because of reduced acreage.

Fruit harvest was mixed. Cherry and prune production was down from 1988, while the apricot harvest reached a record level of 13 million kilograms.

Switzerland at a Glance

Population (1990): 6.7 million
Urban population: 60%
Population growth rate: 0.6%
Per capita gross national product (1989): $27,758
Total land area: 41,293 square kilometers; 49% agricultural, 26% forest and woodland
Major crops: Forage, grains, fruits, vegetables
Livestock sector: Dairy cattle, beef cattle, hogs, poultry
Leading agricultural exports: Cheese and other dairy, cotton and products, wood and forestry products
Leading agricultural imports: Wood and forestry products, beverages, fruits, cotton and products, vegetables, oilseeds and products
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 4%
Membership in economic or trade organizations: EFTA, GATT, OECD

The grape harvest was above average, and good-quality wines were expected.

Beef and veal production was up about 2 percent, and pork production also increased in 1989. Because of the increased supply, producer prices dropped. Consumption of poultry rose, but fewer eggs were consumed as a result of salmonella publicity.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Almonds	27	77
Beef [2]	54	13
Corn, except seed	18	3
Cotton, raw	125	35
Dates	4	29
Durum wheat	20	39
Fats and oils	71	4
Fruit and vegetable juices	58	5
Furskins	47	13
Grapefruit	9	29
Meat of horses, donkeys, etc.[2]	23	43
Oilseeds	102	14
Pet food	175	6
Pulses	7	14
Raisins	6	13
Rice	19	47
Tobacco	113	29
Vegetables, dried	34	8
Wood and forestry products	819	1
All agricultural products[3]	5,536	4

[1] *Values are shown in U.S. dollars at U.S.$1=1.6355 Swiss francs.*
[2] *Excludes byproducts.*
[3] *Includes products not listed. Excludes fish.*

Farm and food policy

The Swiss constitution provides the foundation for agricultural policy. Its two primary objectives are preservation of farmers through a viable agriculture and stockpiling to ensure the availability of food.

Agricultural policy will continue to support the existing level of food self-sufficiency (60 to 65 percent), maintain emergency stocks, and support farming in Alpine and other difficult zones.

However, proposed policy changes include less reliance on the price mechanism for supporting farm income, less intensive use of polluting resources, and more specialty livestock and crop production.

Currently, Swiss price support policies do not permit price declines for some major commodities, even when domestic supplies increase substantially because of good growing conditions.

Imports and exports

Switzerland is a net agricultural importer, with purchases of $5.5 billion in 1989, compared with exports of $2.7 billion. The European Community (EC) is the top supplier and accounts for about two-thirds of total agricultural imports.

Agricultural imports from the United States totaled $244 million in 1989. Although the U.S. share of total Swiss agricultural imports increased slightly in 1989, it remains near its postwar low of about 4 percent.

The long-term erosion of U.S. market share has been in bulk products. Major improvements cannot be expected until EC export subsidies are reduced and U.S. products are more competitive in price and quality. In 1990, however, imports from the United States probably increased because of the lower dollar exchange rate. Market opportunities are strongest in the area of manufactured, high-value products.

Swiss primary agricultural exports are small, with cheese being the main item. In 1989, Switzerland exported $386 million worth of cheese and other dairy products. Other exports were manufactured cotton and wood products ($540 million and $237 million, respectively), forestry products ($259 million), food preparations ($245 million), cocoa and cocoa products ($177 million), and manufactured tobacco ($172 million).

Trade policy and prospects

Agricultural policy has become a major issue as Switzerland considers its future trading relationship with the EC and the unified EC market planned by the end of 1992.

Although it does not intend to join the EC soon, the Swiss Government has said that the country must remain "fit for EC membership." Therefore, Government policy is to coordinate or adjust Swiss regulations to those of the EC and, along with other members of the European Free Trade Association (EFTA), to negotiate further agreements with the EC.

Switzerland is also concerned about its commercial relations with countries demanding agricultural trade liberalization under the General Agreement on Tariffs and Trade (GATT). Switzerland has a strong interest in exporting industrial goods, and market access for those products could be hurt by excessive agricultural protectionism.

Many farm prices are double those of neighboring Germany, and agricultural protection is extremely high. Approximately 70 percent of gross farm income is attributable to Government intervention.

Regarding efforts by the United States and other nations to reform GATT trade rules and move toward a freer global trading system, Switzerland considers agriculture to be one of its most difficult challenges. The President of the Swiss Confederation has stated that agriculture must make further structural adjustments. However, he also has cautioned that the country must not let its self-sufficiency slip much below the current level. ■

Taiwan

T

Profile of agriculture

Agriculture is undergoing significant change on Taiwan. Although the country's economic growth had its foundation in agricultural production (in 1952, agriculture accounted for 32 percent of the gross domestic product), as the economy has become increasingly industrialized agriculture's share of the gross domestic product has shrunk to 4 percent, with continued declines expected.

Island-wide labor shortages are affecting all sectors of Taiwan's economy, but the problem is particularly acute in agriculture, where labor shortages are compounded by an aging farm population and unattractive earnings prospects.

Only the over-60 age bracket of the farming community has shown an increase in size over the last 2 years. In addition, while per capita income increased by 6 percent in 1990 for the population at large, farm family incomes—already 66 percent behind those of nonfarm families—showed a net decline of 9 percent.

Agriculture employs about 13 percent of the labor force of 8.3 million people. However, full-time farm families account for only 9 percent of the total farming population. The average farm size is slightly more than 1 hectare; the median size is 0.6 hectares.

Major crops are horticultural products, sugarcane, rice, corn, and peanuts. Principal livestock products are hogs, poultry, eggs, dairy products, and cattle.

Fishery products, including deep-sea, offshore, and aquaculture products, account for 27 percent of total agriculture production; however, concerns over depletion of the water table and other production challenges such as disease control are limiting growth in this industry.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Corn[1]	380	398
Fruit	2,440	2,370
Rice	1,865	1,850
Sugar[2]	617	490
Tobacco	18	19
Vegetables	2,955	2,166
	thous. head	
Livestock numbers[3]		
Cattle		
Beef	48	46
Dairy	75	78
Hogs	7,783	8,570
Poultry		
Chicken	215,940	227,000
Ducks and geese	44,090	44,990
	thous. metric tons	
Animal product output		
Beef	6	5
Eggs[4]	353	386
Milk	182	200
Pork	917	1,000

[1] *Includes both feed and food uses.*
[2] *Refined sugar.*
[3] *As of December 31 of each year.*
[4] *Million dozen. Includes chicken and duck eggs.*

Production highlights

Production area committed to rice and sugar continues to decline. A rice diversion program, now at the beginning of a second 6-year cycle, has successfully converted rice land to the production of more profitable crops. Sugar is another traditional cash crop now targeted for reduction to domestic consumption levels. Recreation, conservation, tree or vegetable farming, and urban sprawl are considered possible new uses for such land areas.

Several typhoons and unseasonably heavy rains in 1990 caused significant losses in fruit and vegetable production. Prices jumped more than 20 percent over 1989 values in response to reduced supplies. Vegetable production is expected to recover in 1991; however, fruit production is expected to decline further as a result of a decrease in planting areas.

Hog production in 1990 was plagued by an oversupply, as well as a

Taiwan at a Glance

Population (1990): 20.3 million
Urban population: 76%
Population growth rate: 1.0%
Per capita income (1990): $7,992
Total land area: 32,260 square kilometers; 25% crops, 0.4% livestock production, 2% aquaculture, 52% forests
Major crops: Horticultural products, rice, sugarcane, corn, tobacco, peanuts
Livestock sector: Hogs, poultry (eggs, broilers, ducks), aquaculture, dairy cattle
Leading agricultural exports: Aquaculture and sea products, pork, canned and frozen vegetables
Leading agricultural imports: Logs and lumber, corn, soybeans, cotton, dairy products, hides and skins, fishmeal, wool, wheat
Agricultural imports as a share of total imports: 12%
U.S. share of total agricultural imports: 40%
Percent of labor force in agriculture: 13%
Membership in economic or trade organizations: Applied for GATT, 1990

Value of Agricultural Imports, 1989/90[1]

	Total imports	*U.S. share*
	$ mil.[2]	*%*
Selected products		
Beef	152	21
Cotton	387	26
Dairy	287	12
Feed grains		
Barley	39	0
Corn	720	92
Sorghum	9	4
Fishmeal	253	10
Fruit and nuts	229	59
Hides and skins	535	36
Logs and lumber	930	18
Soybeans	534	93
Tobacco leaf	127	84
Wheat	174	84
All agricultural products[3]	5,882	40

[1] July-June.
[2] Values are shown in U.S. dollars at U.S.$1=27.1 new Taiwan dollars.
[3] Includes commercial and concessional imports and products not listed.

temporary import ban by Japan (Taiwan's principal market for pork exports) when a problem with medication residues was discovered in some of Taiwan's pork shipments. Mounting hog waste problems and the fear of depressed prices generated by oversupply are expected to produce a 9-percent drop in hog supplies through 1992.

Poultry production was up 5 percent over 1989 levels. Steadily falling prices for domestic beef cattle are discouraging farmers from producing beef, and an average 3-percent annual decline is predicted through 1992.

Taiwan's deep-sea catch fell by 4 percent in 1990. Aquaculture experienced only a 2-percent growth, with 1990 production estimated at 277,000 metric tons.

Farm and food policy

Taiwan recently enacted an Agricultural Adjustment Plan for 1991 through 1997. Its goal is to ensure domestic food security. Some key features include increased conservation and pollution control measures to answer growing concerns about environmental impact; improved rural land utilization through consolidation of small holdings and the establishment of agricultural specialization zones; a focused marketing program for targeted crops to increase competitiveness; and replacement of agricultural subsidies with direct payments to farmers.

The total cost of the adjustment program is projected at $16 billion over 6 years. More than 60 percent of this funding is targeted for marketing and environmental strategies. This allocation of funds represents a major shift in policy by Taiwan's agricultural authorities as they establish a new role for agriculture in the face of the country's transformation to an industrialized and service-oriented economy.

Imports and exports

Realignment of the new Taiwan dollar against foreign currencies, offshore relocation of labor-intensive industries, and policy emphasis on export diversification significantly affected Taiwan's balance of trade in 1990. The country's global trade surplus fell by 11 percent, with a similar drop expected in 1991.

Agricultural imports in 1989/90 totaled $5.8 billion, of which 40 percent were of U.S. origin.

Agricultural exports accounted for 4.5 percent of Taiwan's total exports in 1990 and were down 5 percent from 1989 exports.

Taiwan's policy of diversifying its export markets, coupled with the country's exchange rate movements against major foreign currencies, lowered the U.S. share of total exports from 36 percent in 1989 to 32 percent in 1990. At the same time, Europe's share of total exports rose to 18 percent, while ASEAN's share swelled to 10 percent. Indirect exports through Hong Kong to mainland China also continued to rise.

Trade policy and prospects

The Agricultural Adjustment Plan announced for 1991 through 1997 specifically addresses the need to adjust agricultural policy to the proposed relaxation of agricultural import barriers.

Under this plan, timetables will be established for the liberalization of trade for several items including broilers, pork, and some fruits.

Actual progress in trade liberalization was limited in 1990. Highlights included the reopening of the dairy cattle market to imports after a 3-year hiatus; tariff reductions or concessions on some cuts of U.S. prime and choice beef, sausages, and processed beef; the opening of the market for turkey and duck meat; and a reduction in the frequency of inspection of turkeys.

Tariffs on agricultural products remain as high as 50 percent of CIF (cost, insurance, and freight) prices. Other nontariff barriers in place include quotas, licensing restrictions, phytosanitary bans, arbitrary bans and specifications, and subsidies for key domestic products.

Import bans continue to be in place for fresh, chilled, or frozen animal offals, animal feet, chicken meat, certain cuts of pork, raw milk and cream, bird eggs, rice, wild rice, fresh garlic (banned January through August), red adzuki beans, melon seeds, sugar, denatured ethyl alcohol of any strength, and processed ginseng products. Quotas are in place on wheat and some fruit; special import fees remain on wheat and milk powder. ■

Tanzania

T

Profile of agriculture

Agriculture is the backbone of Tanzania's economy. It provides 80 percent of the country's export earnings, contributes 45 percent of the gross domestic product, and employs 90 percent of the work force.

Tanzania is located between the Indian Ocean and the great interior lakes of East Africa—Victoria, Tanganyika, and Nyasa. Yet two-thirds of its land area receives insufficient rainfall, and crop potential is low. Most of the arable land is located in the northern and southern highlands, along the coast, and in the western lake region.

As much as half of Tanzania's total land area is devoted to livestock production. Livestock output remains stagnant due to tsetse fly infestation and the prevalence of diseases such as east coast fever. The livestock industry emphasizes beef production under free-range grazing. Dairy farming usually is found in higher rainfall areas associated with mixed cropping systems operated by both Government and private ranches.

The main export crops are coffee, cotton, tea, tobacco, cashew nuts, sisal, cocoa, and cloves. The primary food crops are corn, rice, wheat, pulses, sorghum and millet, sugar, plantains, and potatoes.

Agricultural Production

	1989/90	*1990/91*
	thous. metric tons	
Crop production[1]		
Cashew nuts	113	117
Coffee	55	50
Corn	3,100	2,400
Cotton	34	54
Pyrethrum	1	1
Rice	475	450
Sisal	33	33
Tea	16	16
Tobacco	12	11
Wheat	95	105

	1988
	thous. head
Livestock numbers	
Cattle	12,700
Goats	6,400
Hogs	250[2]
Sheep	3,000

[1] *Calendar years for cashew nuts, cotton, and sisal; Oct.-Sept. crop years for coffee; and July-June for corn, rice, wheat, pyrethrum, tea, and tobacco.*
[2] *Estimated. Growth in the swine sector is minimal due to the influence of Tanzania's Moslem population.*

Production highlights

Overall, agricultural production in 1990/91 will continue the positive growth trend of recent years in response to favorable weather conditions and incentive policies pursued by the Government. Although corn production is forecast to decline 20 percent to 2.4 million tons and rice by 5 percent to 450,000 tons, output levels are reasonably high. Smaller corn and rice harvests reflect the impact of the high cost of imported inputs, and grower cash liquidity problems.

Wheat production, however, will increase to a record level following an expansion of acreage and higher yields from the Canadian-financed wheat-growing project in the Arusha region. This project is the largest wheat-growing scheme in the country, producing between 50 and 60 percent of national output.

Cotton production also will be up sharply in 1990/91. The surge in outturn is a response to higher payments to farmers and the rehabilitation of Tanzania's ginning facilities.

Coffee production is expected to decline because of depressed price levels related to the collapse of the International Coffee Agreement. Lower grower returns for coffee have pressured farmers to cut costs by reducing production inputs, particularly fertilizer and fungicide applications.

Tanzania at a Glance

Population (1989): 24.5 million
Urban population: 18%
Population growth rate: 3.3%
Per capita gross domestic product (1989): $279
Total land area: 940,000 square kilometers; 33% crop use, 50% animal production, 17% nonagricultural
Major crops: Corn, rice, wheat, coffee, cotton, tea, tobacco, cashew nuts, potatoes, bananas, cassava
Livestock sector: Cattle, goats, sheep
Leading agricultural exports: Coffee, cotton, tea, tobacco, cashew nuts, sisal
Leading agricultural imports: Wheat flour, sugar, flavoring syrups, dairy products, pancake flour
Agricultural imports as a share of total imports: 4%
U.S. share of total agricultural imports: 20%
Percent of labor force in agriculture: 90%
Membership in economic and trade organizations: GATT, Lomé Convention, Preferential Trade Area, Southern Africa Development Cooperation Conference

Tea production in Tanzania is improving thanks to greater private investment in the industry, led by the Commonwealth Development Corporation. The rehabilitation of plantations is evident in the higher yields being attained. Area under cultivation remains stagnant at about 19,000 hec-

Value of Agricultural Imports, 1988

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Corn	1.2	0
Dairy products	4.2	10
Processed fruits, vegetables	0.2	40
Rice	4.3	35
All agricultural products[2]	45.0	20

[1] *Values are shown in U.S. dollars at U.S.$1=100 Tanzanian shillings. Includes commercial and concessional imports.*
[2] *Includes products not listed; excludes forest products.*

tares. The low quality of Tanzanian tea should improve under the factory modernization programs now under way.

Farm and food policy

Tanzania's farm and food policy focuses on the expansion of crop production and the liberalization of the agricultural marketing system.

Under the first phase of the country's Economic Recovery Program—financed by the World Bank and International Monetary Fund—producer prices for most crops were raised. At the same time, the role of the Government in marketing crops was reduced, and an effort was made to increase the supply of farm inputs. As an additional production incentive, all export taxes on agricultural commodities were removed.

The National Milling Corporation (NMC), a Government parastatal, was the exclusive buyer of grains for farmers in the early and mid-1980's. Since that time, however, the Government has been reducing the function of NMC and allowing a greater role for both the private trade and producer cooperatives in agricultural marketing.

An active private trade has developed for corn and paddy rice, with grower price fluctuations now based on regional supply patterns. Open-market farm prices for these grains now are higher than Government-set prices.

Unlike corn and rice, the bulk of Tanzania's wheat crop is grown on Government-owned, large-scale farms. Wheat was bought by the NMC from Government farms until the 1989/90 season.

The Government's wheat farms are managed by the National Agricultural Food Company (NAFCO). With the privatization of wheat marketing, NAFCO is expected to pay a milling fee to the NMC and undertake its own wheat flour distribution. Previously, the NMC purchased the wheat from growers and, after milling, sold the flour to both the bakery trade and to consumers through a network of its own retail outlets. NMC's retail outlets have served as the primary distribution network for food items in urban Tanzania.

Imports and exports

In 1989, total export value for both agricultural and nonagricultural products increased to $405 million, compared with $373 million in 1988. Despite growth in the value of its exports, Tanzania runs a negative balance of trade due to the rapid expansion of imported inputs funded by the Economic Recovery Program.

The value of agricultural exports has fluctuated in recent years, but remains significantly below levels achieved in the early 1980's. Export value for agricultural commodities in 1989 was estimated at $213 million, down from the previous year because of lower prices for coffee, cotton, and cashew nuts, and reduced export volumes for cotton, sisal, tea, and tobacco.

The value of Tanzania's imports continues to rise in line with the country's growing need for essential goods to sustain the economic recovery. The growing import bill has exacerbated the country's negative trade balance. Total import value for both agricultural and nonagricultural products rose to $1.3 billion in 1989, compared with $1.2 billion in 1988.

Tanzanian imports of agricultural products from the United States declined to a 5-year low of $900,000 in 1989. This figure compared with $9.2 million in 1988 and $15.0 million in 1987. The sharp drop reflected a downturn in shipments under the U.S. Food for Peace Program.

Trade policy and prospects

Tanzania's trade policy centers on the careful management of its limited foreign exchange, promotion of exports through farm price incentives, elimination of export taxes, and the introduction of a number of import schemes to supply needed consumer and industrial goods. The rapid growth in Tanzania's import bill has worsened the country's trade deficit, and a severe shortage of foreign exchange is evident.

Private commercial activity is limited, with the bulk of imports financed by international donors. The Gulf crisis and the resulting increase in the cost of imported petroleum put a further strain on Tanzania's fragile economy.

Export potential for U.S. agricultural products to Tanzania is limited by the severe shortage of foreign exchange and high transportation costs. Also, Tanzania's membership in such trade protocols as the Preferential Trade Area (PTA) Agreement and the Lomé Convention affects the competitiveness of U.S. exports. ■

Thailand

Profile of agriculture

Thailand is an agricultural powerhouse, with over 40 percent of its land and 60 percent of its work force involved in farm production. Agriculture accounts for about 15 percent of the country's gross national product.

While the average Thai farm is small (2 to 3 acres), the country remains a significant producer of a wide variety of crops including rice, cassava, corn, fruits, and poultry meat. Thailand is becoming a leading producer of aquaculture products, and its cattle sector, both beef and dairy, is growing rapidly.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production[1]		
Cassava	23,312	N.A.
Corn	4,000	4,100
Palm oil	180	200
Pineapples	1,732	1,500
Rice	21,121	21,000
Soybeans	672	480
Sugar	35,000	35,500
	thous. head	
Livestock numbers		
Cattle		
Beef	4,500	4,660
Dairy	60	70
Hogs	4,679	4,612
Poultry		
Broilers	422,000	454,000
Layers	1,627	1,708
	thous. metric tons	
Animal product output		
Beef	135	143
Eggs	251	269
Milk	125	150
Pork	320	333
Poultry	553	595

[1] *Crop years are July-June for corn, Sept.-Aug. for soybeans, and Dec.-Nov. for sugar.*
N.A. = not available.

Agricultural exports are an important part of the economy, accounting for 40 percent of total export earnings. Thailand is the world's leading exporter of rice, cassava, and canned pineapple ($4 billion per year), the second leading exporter of sugar, and sixth in exports of poultry meat.

Production highlights

Thailand's agricultural output declined by 2 percent in 1990, following an increase of nearly 4 percent the year before. Crop production, which accounts for about three-fifths of Thailand's agricultural output, was down by more than 4 percent as a result of a severe drought at the beginning of the cropping season and then floods, caused by Typhoon Ira, at the end of the season.

Output of the three crops that account for about 40 percent of Thailand's total crop production—rice, corn, and sugarcane—fell by 15 percent as a result of the bad weather. Rice also was damaged heavily by the brown plant hopper. The production of tapioca, another important crop, also was down.

In contrast, four other major cash crops—rubber, cassava, palm beans, and coffee—showed a combined production gain of 14 percent.

Thailand, already the world's third largest producer of rubber, ranks as the world's fastest growing producer of this commodity and could match world leader Malaysia by 1993 if current growth rates are maintained. The critical factor sustaining the industry's growth has been the replacement of aging rubber trees in southern Thailand, site of 90 percent of the country's production, with high-yielding varieties, as well as new plantings in the northeast section of the country.

The value of Thailand's livestock output rose an estimated 7.5 percent in 1990 on the strength of increased poultry and pork production. Dairy and beef output also rose significantly, although production remains low.

Overall fisheries production was steady, but Thailand produced an estimated 240,000 tons of shrimp in 1990, up 10 percent from 1989. Prawn culture yielded 120,000 tons in 1990, an increase of 20 percent. Growth is expected to continue in 1991.

Thailand at a Glance

Population (1990): 56.3 million
Urban population: 18%
Population growth rate: 1.6%
Per capita income (1989): $1,241
Total land area: 523,653 square kilometers; 34% paddy and field crops, 6% tree crops, 1.5% animal production
Major crops: Rice, cassava, fruits, corn, sugar, oilseeds
Livestock sector: Fishery products, hogs, poultry, cattle
Leading agricultural exports: Rice, cassava, sugar, frozen poultry, pineapples, corn
Leading agricultural imports: Wood products, cotton, hides and skins, dairy, animal feed ingredients, tobacco, wheat, coarse grains, starches
Agricultural imports as share of total imports (1989): 6%
U.S. share of total agricultural imports (1989/90): 18%
Percent of labor force in agriculture: 60%
Membership in economic or trade organizations: ASEAN, Cairns, GATT

Value of Agricultural Imports, 1989/90

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal feed	34.9	11
Cotton	424.5	35
Dairy	148.1	2
Fruit and nuts	23.9	68
Milled products	43.9	2
Rawhide, skin, and leather	236.6	16
Tobacco	69.5	91
Waste from food industry	148.5	6
Wheat	64.1	51
Wood products	485.2	[2]
All agricultural products[3]	1,990.2	18

[1] *Values are shown in U.S. dollars at U.S.$1=25* baht.
[2] *Less than 1 percent.*
[3] *Includes products not listed. Excludes fishery products.*

Farm and food policy

The Government maintains a policy of production supports, export promotion, and import substitution to assist local farmers, traders, and food processors.

In the face of lower commodity prices, the Government is increasing the scope and range of programs designed to help local farmers. It continues to provide financing to certain rice growers, while encouraging others to plant substitute crops. It has also been aggressive in boosting rice exports through government-to-government sales that have included loans at below-market interest rates.

The Thai Government encourages and protects local soybean growers in order to stimulate production and reduce imports. Price support is provided through an agreement with crushers to buy beans at an established level. Crushers, in turn, are protected from cheaper imports through a variety of restrictive measures.

In 1990, in response to the reduced competitiveness of Thai poultry meat and shrimp exports, the Government approved measures to ease the import of soybean meal, fishmeal, and corn. Duties were reduced and, in the case of soybean meal, the import quota was lifted. However, a surcharge was put in place to protect the prices of locally produced feedstuffs. The surcharge has, at times, priced imports out of the market. However, the new policy, along with growth in the livestock sector, led to larger soybean imports in the second half of 1990.

Thailand's private sector leads the way in crop diversification, while the Government provides research and other support. Transportation, financing, storage, inputs, and processing are provided mainly by private enterprise.

Imports and exports

Thailand enjoys a substantial surplus in its balance of agricultural trade. Agricultural exports totaled over $8 billion in 1989 versus imports of less than $2 billion.

Exports were up 20 percent in 1989 from 1988. Rice led the way at 6 million tons valued at $1.75 billion. However, rice exports dropped precipitously in 1990 to about 4 million tons ($1 billion) because of lower demand as well as increased competition from Vietnam.

Other important export products are cassava, sugar, canned pineapple, corn, and chicken meat.

Agricultural imports for 1989, at $1.96 billion, were up from $1.65 billion in 1988. The bulk of Thailand's imports are used to feed its export industries: cotton for textile mills, wood products for furniture factories, and animal skins for the leather and shoe industries. Thailand also has large import requirements for dairy products and tobacco.

U.S. exports to Thailand totaled $190 million in 1989. The United States enjoys a large share of the tobacco, fresh fruit, wheat, and cotton markets and is rapidly increasing its exports of animal hides and wood products. The market potential is good for breeding stock (particularly beef cattle), ingredients for the food processing industry, animal feeds, and grocery products.

Thailand's agricultural balance of trade with the United States is approximately 2-to-1. Exports to the United States totaled $432 million in 1989, compared with imports of $190 million.

Trade policy and prospects

Thailand employs policies designed to maximize exports and restrict imports. Commodities that the country cannot produce efficiently are protected by high import duties, surcharges, and outright bans. Most processed food products are taxed heavily (60 percent ad valorem plus local taxes) and require a lengthy preregistration process that can cost up to $1,000. However, there is a trend toward trade liberalization.

Thailand is a member of the Cairns Group, an association of 13 nations that advocates free trade in the Uruguay Round of the GATT Multilateral Trade Negotiations. In the spirit of those negotiations, the Thai Government dropped its import ban on three food products and discussed lowering the duties on others. In 1989, the Government reduced the duties on wheat and apples by 57 and 88 percent, respectively.

Trade liberalization, a healthy economy, a large population, and a growing industrial base are making Thailand an important market for U.S. agricultural exports. ■

Tunisia

Tunisia at a Glance

Population (1990): 8.1 million
Urban population: 52%
Population growth rate: 2.4%
Per capita income (1990): $1,635
Total land area: 155,360 square kilometers; 52% agricultural use
Major crops: Wheat, barley, oil olives, citrus, dates
Livestock sector: Poultry, sheep, goats, dairy
Leading agricultural exports: Olive oil, oranges, palm dates, live animals, wine, almonds
Leading agricultural imports: Wheat, corn, soybean meal, milk, vegetable oil, beef, cotton, wood, tobacco, sugar, barley, seeds, live animals
Agricultural imports as share of total imports: 15%
U.S. share of total agricultural imports: 17%
Percent of labor force in agriculture: 33%
Membership in economic or trade organizations: GATT, North African Maghreb Union

Profile of agriculture

Tunisia's agriculture is based on wheat—the dietary staple—and barley, integrated with sheep and cattle. Agriculture contributes 14 percent of the country's gross domestic product, accounts for roughly a third of all employment, and uses about 35 percent of the arable land.

Tunisia has a mixed economy. There are many state-owned industries and agricultural estates. Private ownership is extensive but highly regulated. The country reached its peak of socialist intervention in 1970. Since that time, the economy has become increasingly privatized and deregulated. The International Monetary Fund and World Bank policy prescriptions of the 1980's call for further reliance on market forces and the privatization of parastatals.

Most of the best agricultural land is in the well-watered northern and coastal regions. Large, mechanized, irrigated farms have garnered the bulk of public expenditures on agricultural water projects, fertilizer subsidies, high-yielding varieties, and marketing infrastructure.

The rain-fed grain and sheep smallholder economy of central and southern Tunisia, in contrast, has had relatively little political power and attention. However, in recent years, the development assistance from outside donors has been directed to the smallholder sector.

Wheat and barley are the dominant grains and account for most of the cultivated area. Tunisia is no longer self-sufficient in wheat. The country also produces a wide variety of fruits and vegetables. Citrus, dates, olives, and almond exports are an important source of foreign exchange.

The development of the cattle and dairy sectors has been inhibited by the availability of subsidized beef and dairy products from Europe. The Tunisian poultry sector was officially encouraged and developed rapidly in the 1980's. Tunisia is now self-sufficient in poultry; eggs and poultry meat are exported. Poultry production depends on imported feed, primarily U.S. corn and Spanish soymeal. Soybeans and soybean oil are imported for crushing and blending with olive oil.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production		
Almonds	35	52
Barley	200	478
Cereals	620	1,599
Palm dates	72	75
Olives for oil	230	820
Oranges	140	123
Vegetables	1,380	1,792
Wine grapes	35	40
	thous. head	
Livestock numbers		
Cattle		
Beef	206	213
Dairy	344	347
Goats	1,000	1,050
Poultry		
Broilers	2,427	2,904
Layers	3,500	3,850
Sheep	5,548	5,714
	thous. metric tons	
Animal product output		
Beef and veal	33	34
Lamb	33	34
Cheese	4	4
Eggs[1]	83	85
Milk	370	400
Poultry meat	48	47

[1] *Million dozen.*

Production highlights

Tunisia's agricultural production improved in 1990 with a total grain output of 1.6 million metric tons, more than double the 620,000 metric tons harvested in 1989.

In 1990, olive oil production amounted to about 130,000 metric tons, and the 1991 crop is expected to be larger because of better weather.

Tunisian palm date production increased from 72,000 metric tons in 1989 to 75,000 metric tons in 1990, the result of good weather and more trees entering the production stage.

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animals, live	12	0
Barley	20	78
Corn	43	76
Cotton	53	0
Dairy products	44	0
Hides and skins	50	0
Seeds	12	0
Soybean meal	32	14
Soybean oil	42	38
Tobacco and cigarettes	31	24
Wheat	149	35
Wood	112	2
All agricultural products[2]	895	17

[1] *Values are shown in U.S. dollars at U.S.$1=0.833 Tunisian* dinars.
[2] *Includes products not listed.*

In 1990, citrus production was 237,000 metric tons, down about 9 percent from the previous year's level.

Almond production was 52,000 metric tons (in-shell) in 1990, compared with 35,000 metric tons in 1989. This figure represents an increase of about 17 percent, the result of better weather.

Farm and food policy

Farm and food policy is aimed at improving agricultural production to achieve self-sufficiency in commodities such as wheat, milk, and red meat. The Government also is helping to increase the export of agricultural products such as citrus, palm dates, olive oil, and vegetables.

In 1990, the Government continued to provide economic incentives to stimulate production of cereals and livestock. Major measures were as follows:

- Cancellation of farmer loans outstanding through the end of 1987 with principal not exceeding $1,050. This measure affected up to 200,000 farmers and amounted to $53 million.
- Continuation of the feed assistance given to livestock growers.
- Assistance to farmers hit by hail storms in the Kairouan region.
- Freeing tractor and combine imports by lowering custom tariffs.

The Government continued to provide subsidies for basic agricultural commodities such as wheat and wheat products, vegetable oil, and milk, and for other commodities such as sugar and fertilizers.

The Government has been pursuing the privatization of the agricultural sector that began in 1988. However, progress has been slow. The sale of agricultural inputs such as fertilizers and herbicides has been authorized by both private farms and Government agencies.

Imports and exports

Tunisia is a net agricultural importer, with purchases of $895 million in 1990 versus sales of $462 million.

Imports were down in 1990 from the year before as a result of improved domestic yields. Major import items were wheat, barley, corn, and meat.

Grain imports totaled 900,000 metric tons, with the United States supplying 45 percent of the total. The main competitor was France.

Major exports included olive oil, palm dates, oranges, and live animals. Exports of olive oil constituted an appreciable source of foreign currency earnings, an estimated $128.3 million or 28 percent of the total agricultural export value.

Palm dates are also an important export, valued at about $54 million in 1990. Target markets included North America, the Far East, and Australia.

Trade policy and prospects

Tunisia continues to encourage domestic production to satisfy local demand with minimum foreign exchange allocation for imports. The Government also encourages agricultural production of commodities with potential for export in order to improve the country's trade balance. Tunisia has gradually eased its licensing process, particularly for lumber imports; however, control of imports of essential foodstuffs is still in effect.

Tunisia faces deficits in many major agricultural commodities, such as food and feed grains, coffee, wood products, sugar, milk, and meat. The minimum customs tariff rate on imported agricultural products ranges from 15 percent on basic necessities such as sugar to 43 percent on processed foods and high-value products such as vegetables and fruit preserves, refined vegetable oils, dried fruits and nuts, wine, and malt.

Tunisia's import financing policy aims at reducing external debt by limiting short-term obligations and using medium- and long-term credit to cover basic food needs. Despite strong competition from EC countries, U.S. Government export assistance programs will help the United States remain a major supplier of basic agricultural products such as wheat, corn, barley, sorghum, and vegetable oils.

Additional export opportunities exist for wood products, bull semen, tallow, soybean meal pellets, and seeds. ■

Turkey

T

Profile of agriculture

The agricultural sector is a driving force in the Turkish economy, employing almost half of the country's population. Agricultural production—primarily grains, cotton, tobacco, fruits, and vegetables—contributes more than one-fifth of the gross domestic product. In addition, a significant portion of industry is involved in processing agricultural products.

Agricultural Production

	1988	*1989*
	mil. metric tons	
Crop production		
Apples	1.8	1.7
Barley	7.0	4.9
Corn	2.2	1.9
Cottonseed	1.23	1.16
Filberts	0.4	0.5
Grapes	2.7	2.5
Olives	1.1	0.7
Potatoes	4.3	4.4
Sugar (raw)	1.4	1.4
Wheat	15.0	11.5
	mil. head	
Livestock numbers [1]		
Cattle		
Beef	4.3	4.2
Dairy	5.0	5.0
Poultry	200	210
Sheep	42	40
	thous. metric tons	
Animal product outpnt		
Beef and veal	280	290
Butter	70	75
Cheese	400	425
Eggs[2]	6.8	7.2
Milk	4,500	4,600
Mutton, lamb, and goat meat	380	370
Poultry meat	236	254

[1] *Estimates as of January 1 each year.*
[2] *Billion eggs.*

Turkey is self-sufficient in major foodstuffs. Bread, rice, beans, and chickpeas are dietary staples. Even though meat, eggs, and dairy products are luxuries, they are readily available at market prices.

Production highlights

Agriculture had a poor year in 1989. Because of unusually dry weather, production of most crops dropped significantly.

In fact, instead of the planned 2.6-percent growth, the agricultural sector showed a real decline of about 8 percent.

After reaching record levels in 1988, wheat and barley harvests were down 20 to 30 percent in 1989. Apple, grape, and olive crops were also lower.

In contrast to the crop sector, production of most animal products increased in 1989, with higher output of milk, cheese, beef, and poultry meat.

Farm and food policy

Turkey's priority for agriculture has been to achieve self-sufficiency in output and to expand exports.

Support prices continue to be the major tool in regulating agricultural production. The Government also subsidizes fertilizers and imports seeds for distribution to farmers on credit.

The Government pays special attention to double-cropping in suitable areas and to the introduction and use of high-yielding seeds. Production of corn and oilseeds is encouraged in the Cukorova area, in particular after the wheat harvest. Producers there are shifting from cotton to planting citrus and melons, along with corn, soybeans, and wheat in rotation.

To reduce the amount of fallow land, the Government subsidizes input prices for farmers who plant feed legumes such as vetch and cowpeas instead of leaving their land idle.

Turkey at a Glance

Population (1990): 57 million
Urban population: 44%
Population growth rate: 2.4%
Per capita income (1990): $1,900
Total land area: 814,578 square kilometers; 60-65% agricultural use
Major crops: Cereal grains, cotton, tobacco, sugar beets, fruits, nuts, pulses, olives
Livestock sector: Beef and dairy cattle, sheep, poultry, goats
Leading agricultural exports: Tobacco, livestock and products, nuts, pulses, cotton, fruits
Leading agricultural imports: Wheat, cigarettes, hides and skins, wool, cotton, rice, wood and wood products
Agricultural imports as a share of total imports (1989): 9%
U.S. share of total agricultural imports (1989): 34%
Percent of labor force in agriculture: 45-50%
Membership in economic or trade organizations: GATT, OECD

The Government continues to devote special attention to improving land and water resources and expanding irrigation; roughly two-thirds of total public investment is targeted toward this goal. Budget constraints in 1989 prevented completion of all of the planned irrigation projects, but Government development programs continue to give priority to infrastructure investments.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Cigarettes	197	91
Corn	74	46
Cotton	100	45
Hides and skins	163	2
Rice	83	63
Tallow	33	94
Vegetable oil	268	0
Wheat	374	22
Wood and products	77	25
Wool	94	0
All agricultural products[2]	1,600	34

[1] *Values shown in U.S. dollars at U.S.$1=2,394.20 lire.*
[2] *Includes products not listed.*

The food processing sector is growing. Turkey processes soups, beverages, fruits, and vegetables, and some processed meats have proven successful in export markets.

Although two national chains were recently joined by four others, grocery products are marketed to consumers mainly through small, independent family-run stores.

Imports and exports

In most years, Turkey is a net exporter of food products. Its sales in 1989 totaled $2.4 billion, versus imports of $1.5-$1.6 billion.

Since the mid-1980's, Turkey has been shifting from exporting raw agricultural products to exporting processed items. These efforts to put added value into agricultural exports have resulted in a commensurate decline in the country's shipments of raw commodities.

The major export commodities in 1989 were tobacco ($481 million), livestock and products ($337 million), filberts ($266 million), pulses ($209 million), tomato paste ($337 million), cotton ($137 million), raisins ($116 million), citrus ($106 million), and wheat ($68 million). Other agricultural exports included dry apricots, olive oil, dried figs, pistachios, and barley.

Agricultural imports in 1989 consisted primarily of wheat, cigarettes, hides and skins, wool, cotton, rice, wood and wood products, vegetable oil, corn, and tallow.

Dry weather and low crop production in 1989 resulted in increased imports, including record-large grain purchases by the Government. The private sector also imported large quantities of rice, most of which came from the United States.

Trade policy and prospects

Turkey would like to join the European Community (EC) and has introduced radical changes to its import regime in an effort to harmonize its foreign trade system with that of the EC.

Importers are no longer required to deposit certain amounts of money to get foreign currency allocations. Because duties and surcharges also have been reduced, imports are cheaper. For example, the import duty on 7,545 items has been lowered and imports of 333 items are now tax-free. The number of items subject to surcharges was reduced from 7,880 to 5,523.

At the same time, the Turkish Government has put in place extremely strict plant health regulations that, if diligently enforced, could effectively cut off imports of most plants and plant products, including seeds for planting, bulk grains, oilseeds, logs, and numerous fruits and vegetables.

Turkey's export policies generally aim at promoting value-added exports, while discouraging exports of raw commodities. The main tools employed are tax rebates, used to support exports of value-added commodities, and export taxes or deposits applied on raw commodity exports such as filberts and dried fruit.

For example, while Turkey's value-added tax (VAT) for basic food items currently stands at 6 percent, agricultural commodities with a high export potential are subject to only a 1-percent VAT. In contrast, for a raw commodity such as filberts, exporters are required to pay an export tax ranging from 10 to 40 cents a kilogram, depending on the quality and type. Similarly, raisin exporters are required to pay $60 a ton to export. However, these export taxes are waived on shipments to North and South America, Oceania, the Far East, and non-Mediterranean African markets.

The Turkish Government wishes to expand trade with all countries, with emphasis on the EC, Eastern Europe, the Middle East, and North Africa. Turkey also wants to expand its trade with North and South America and the Far East.

Because of its flexible trade policy, the country's overall exports (agricultural and nonagricultural) rose from $5 billion in 1982 to $11.7 billion in 1989. Despite these increases, Turkey continues to run a sizable trade deficit, which probably will continue at least through the next few years. ■

United Arab Emirates

U

Profile of agriculture

The agricultural sector of the United Arab Emirates (UAE) is small but varied. Production is limited by long, scorching summers, minimal rainfall, and sandy soil.

The cultivable area of the UAE is estimated at 50,000 to 60,000 hectares, about 1 percent of the UAE's total area of 77,700 square kilometers. Seventy percent of cultivable land is utilized, with most agricultural activities concentrated in the northeastern and southeastern regions of the country.

Agricultural Production

	1986/87	*1987/88*
	thous. metric tons	
Crop production[1]		
Cabbage	18	12
Eggplants	12	15
Green fodder	254	351
Lemons	7	14
Mangoes	9	7
Tomatoes	25	26

	1988
	thous. head
Livestock numbers	
Camels	99
Cattle	
Beef	43
Dairy	3
Goats	574
Sheep	222

	1988	*1989*
	thous. metric tons	
Animal product output		
Beef and veal	11	11
Eggs[2]	166	170
Milk, cow	10	14
Goat, sheep, camel meat	33	34
Poultry meat	13	14

[1] *Crop year is July-June.*
[2] *Million eggs.*

Principal products include dates, green fodder, fresh vegetables, and citrus fruits. Government assistance has helped farmers achieve 100 percent self-sufficiency for fresh vegetables during the main production season between November and April.

Other significant self-sufficiency levels are 89 percent for fresh milk, 87 percent for fodder, 35 percent for poultry, and 32 percent for red meat. The UAE is completely dependent on imports of wheat, sugar, rice, feed grains, and edible oils.

The average farm size is estimated at 2.3 hectares. All farms are privately owned, with the exception of some experimental stations. Despite considerable Government intervention, the agricultural sector's contribution to the gross domestic product remains below 1 percent.

Production highlights

Agricultural production in 1989, including fisheries, was valued at $476 million. This was 410 percent higher than in 1977. Attention to and expansion of the agricultural sector, particularly the dairy and poultry segments, remains a priority.

Since independence in 1971, the UAE has invested a great deal in its farm sector; agricultural area tripled between 1974 and 1989 to 41,600 hectares. Crop production increased 406 percent between 1977 and 1988 (vegetables 347 percent, fruits 362 percent, field crops and fodder 963 percent).

Animal production, mainly dairy and poultry, also showed remarkable growth. The number of live animals (dairy cattle, sheep, goats, and camels) more than doubled from 412,269 in 1977 to 937,151 in 1989.

Recent increases in production have been recorded for milk (from 43,000 metric tons in 1988 to 48,000 tons in 1989); poultry (from 13,000 metric tons in 1988 to 14,000 in 1989); and table eggs (from 166 million in 1988 to 170 million in 1989). Red meat production remained unchanged at 11,000 metric tons.

United Arab Emirates at a Glance

Population (1990): 1.8 million
Urban population: 75%
Population growth rate: 3%
Per capita income (1990): $16,400
Total land area: 77,700 square kilometers; 1% agricultural
Major crops: Dates, green fodder, fresh vegetables, citrus
Livestock sector: Poultry, dairy, sheep, goats
Leading agricultural exports: Vegetables, seafood
Leading agricultural imports: Fresh fruits, rice, live animals, dairy products, red meats, sugar, poultry meat, timber, feed grains
Agricultural imports as a share of total imports: 15%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 2%
Membership in economic or trade organizations: GCC, OAPEC, OPEC

Farm and food policy

The Government plays a very important role in improving and developing the agricultural sector. In addition to free land, it provides seeds, fertilizers, and farm chemicals to farmers at 50 percent of the cost. It also provides farmers with loans to buy farm machinery and with free services includ-

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animals, live	67	0
Dried pulses	17	6
Cereals and products	40	4
Corn	8	84
Dairy products	84	0
Fruits, noncitrus	169	3
Juices, fruit and vegetable	4	48
Poultry meat	61	3
Red meats	92	1
Rice	159	2
Vegetables[2]	128	3
All agricultural products[3]	1,556	4

[1] *Values are shown in U.S. dollars at U.S.$1=3.673 dirhams.*
[2] *Includes fresh, frozen, and preserved.*
[3] *Includes products not listed.*

ing water wells, farm machinery repair, land cultivation, and extension and training for interested UAE nationals.

The Government also conducts the following activities to increase productivity:

- Agricultural research and experimentation;
- Agricultural extension and personnel training;
- Control of agricultural diseases, insects, and pests;
- Encouragement of farmers in the use of the latest irrigation technology;
- Establishment of agricultural cooperatives; and
- Enforcement of plant and animal protection laws.

The Government maintains a free-market policy toward the sale and marketing of agricultural products, which is conducted mainly by private wholesalers and merchants. Nevertheless, agricultural marketing systems organized by local governments do exist. In the southeast, such a marketing system has been operating since 1971: the local government buys farm products that it retails for the price at which it purchased them. Marketing costs are assumed by the local Directorate of Agriculture.

Small retail stores and modern U.S.-style supermarkets are the predominant retail outlets. Fresh produce, meats, seafood, and poultry are still widely marketed in open-air, central markets that are built and maintained by local municipalities.

The import, production, and distribution of food is handled by the private sector; the Government does not interfere in market activities as long as the trade abides by established laws.

Imports and exports

Despite the efforts of the Ministry of Agriculture to increase farm production, complete self-sufficiency is not expected. The UAE depends heavily on foreign sources for fresh fruits and vegetables, poultry and red meats, live animals, grains, and dairy products.

Imports of foodstuffs have been increasing steadily for the past few years; they amounted to $1.5 billion in 1989, of which $57 million came from the United States.

With the exception of seafood and limited exports of fresh vegetables, the UAE's exports of food products are small. The UAE is an important re-export point for food products to neighboring countries in the Gulf, Southeast Asia, and East Africa.

Trade policy and prospects

Food trade is completely unrestricted. The Government does not levy any import taxes, duties, or tariffs on imported food products, and no protection is provided for local production against imports.

Legislation exists to protect local consumers against food health hazards, however, and all locally produced products must also meet these health requirements.

Imported products must be accompanied by a certificate from the Government of the exporting country stating that they are fit for human consumption. Imported and locally processed and packaged food products must bear labels showing dates of production and expiration, brand and product name, ingredients, net weight, and country of origin. Arabic labels are required, but this requirement is not stringently enforced.

Shelf lives of most food products are specified by the Government and exporters must abide by them. If the UAE has not specified the shelf life of a product, the manufacturers' specification is generally accepted.

Demand for high-quality branded products is continuously increasing in the UAE. ■

United Kingdom

U

Profile of agriculture

Agriculture in the United Kingdom (UK)—England, Scotland, Wales, and Northern Ireland—is intensive, highly mechanized, and efficient, by European standards. However, it produces only about 58 percent of Britain's food and feed requirements because of climatic factors.

Roughly 2 percent of the workforce is engaged in farming. Livestock, grain, and dairy farming account for the greater part of production. Farms average about 52 hectares (128 acres), the largest average size in the European Community (EC).

Agriculture contributes only about 1.4 percent to the UK's gross domestic product.

Agricultural Production

	1988/89	*1989/90*
	mil. metric tons	
Crop production[1]		
Barley	8.70	8.07
Mixed grain	0.02	0.02
Oats	0.55	0.53
Potatoes	6.90	6.20
Rapeseed	1.04	0.95
Rye	0.03	0.03
Sugar, raw	1.34	1.37
Wheat	11.72	14.03

	1989
	mil. head
Livestock numbers[2]	
Cattle	
Beef cows	1.8
Dairy cows	3.4
Chickens	117.4
Hogs	7.5
Sheep and lambs	43.8
Turkeys	9.4

[1] *July-June crop years.*
[2] *June 1989 survey data, except November 1989 for turkeys.*

Production highlights

Guaranteed prices were frozen in 1990 for all UK agricultural products as part of the EC's Common Agricultural Policy. Price fixing, however, involved major devaluations of the agricultural currency, which raised the level of support prices in the UK by 8.5 percent in the beef sector, 10.7 percent for crops, 6.8 percent for milk, and 11 percent for sheep meat.

The value of 1990 agricultural production in the UK rose moderately (2 percent), while input costs rose nearly 4 percent. In spite of support increases due to currency devaluation, rising costs and greater overall production have led to low prices and returns for most major commodities.

Total income from farming fell by 7 percent in 1990; however, this decline was not equally distributed across farm types. There was a recovery for cereal producers and intensive livestock farms, while incomes declined for dairy and extensive livestock enterprises. In 1990, net farm income, in real terms, fell by 50 percent for lowland livestock producers and by 35 percent for the dairy sector, to the lowest levels in more than 5 years.

These declines followed increases in agricultural income during 1988 and 1989, when UK farmers reaped the benefits of the high prices that followed the North American drought. The cereal sector enjoyed relatively good returns, while dairying under production quotas proved to be the most profitable farm enterprise.

Weather conditions in the UK in the 1989/90 agricultural year were sunnier, warmer, and drier than normal, although rainfall varied considerably across regions. Yields and quality of winter crops were generally good, but the spring crops and potatoes were affected by drought. The summer drought caused forage prices to escalate.

The UK cereal harvest in 1990 was early and was completed under favorable conditions. Production levels in 1989 and 1990 were high and nearly identical at 22.6 million metric tons. Higher yields offset a reduction of about 180,000 hectares in area sown.

United Kingdom at a Glance

Population: 57.2 million
Urban population: 87%
Population growth rate: 0.3 percent
Per capita income (1989): $12,560
Total land area: 241,590 square kilometers; 27% cultivated, 48% meadows and pasture, 9% forest and woodland
Major crops: Wheat, barley, sugar, potatoes, rapeseed
Livestock sector: Cattle, sheep, pigs, poultry
Leading agricultural exports: Livestock, barley, wheat
Leading agricultural imports: Fruits and vegetables, meat and meat preparations, beer and wine, cereals, dairy products, coffee, tea, cocoa
Agricultural imports as a share of total imports: 11%
U.S. share of total agricultural imports: 4%
Percent of labor force in agriculture: 2%
Membership in economic or trade organizations: EC, GATT, IBRD, IDA, IDB, IFAD, IFC, IMF, OECD

Value of Agricultural Imports, 1990

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal feed	1,137	9
Beer and wine	2,117	1
Fruits, vegetables	5,396	5
Meats and preparations	3,436	0
Oilseeds	1,497	33
Tobacco	687	11
All agricultural products[2]	23,482	4

[1] *Values are shown in U.S. dollars at U.S.$1=0.55 pounds. Includes commercial and concessional imports.*
[2] *Includes products not listed. Excludes forest products.*

Declining premiums for milling wheat over the past 2 years have led to a smaller percentage of milling wheat planted and will result in shortages. The quality of both wheat and barley crops was good, with an increase in supplies of premium malting barley.

Significant increases were noted in the area planted to oilseed rape. Compound feed consumption, down in 1988/89, recovered in 1989/90 due mostly to increases in poultry production.

The hot, dry summers of 1989 and 1990 put severe stress on nonirrigated sugar beets. Total supply, however, was still above the maximum quota of 1.14 million metric tons set for the UK under the EC's Common Agricultural Policy for sugar.

Production of peas and beans rose slightly due to higher yields. Area planted to linseed doubled over the period due to attractive EC support prices.

The livestock sector in the UK expanded during 1988 and 1989, but it was severely hit by depressed market conditions in 1990. In the beef sector, significant increases in output have been matched by a long-term decline in consumption. During 1990, the outbreak of bovine spongiform encephalopathy in dairy herds, the Gulf crisis, and the effects of German unification further weakened demand for British beef.

Milk production increased by 2.5 percent in 1990. Production of butter, skim milk powder, and cheese also rose. Market prices fell steadily from the end of 1989, triggering public intervention buying.

Sheep meat production continued expanding, although prices in 1990 were about 1.5 percent below those of the previous year. Tight supplies of pork early in 1990 led to record prices in the UK. However, prices fell in the second half, and the market is expected to remain depressed in 1991.

Farm and food policy

Agricultural policy in the EC and the UK is going through a period of change. The reforms introduced since 1986, aimed at curbing the surplus production, have not been as effective as expected.

New reforms of the agricultural support system are likely to place greater emphasis on the conservation of the countryside and less emphasis on commodity support. The UK Government has already introduced policies consistent with this approach. In 1990, it launched a program whereby farmers were paid to restrict their fertilizer use. The set-aside scheme was amended to include conservation options. Pilot plans favoring smaller scale, less intensive beef and sheep operations also were launched, with the aim of reducing production.

As a member of the EC, the UK is pressing for more market-oriented reforms in the EC's Common Agricultural Policy. The UK has insisted that the cuts to agricultural support be applied equally across member states and across commodities. UK farmers are relatively efficient compared with their EC counterparts, and they wish to maintain their comparative advantage.

Imports and exports

The UK is a net agricultural importer, with purchases of $23.5 billion in 1990 versus sales of $10.0 billion. The EC is the UK's major supplier of most imports, especially items covered by the variable levy system, which impedes imports from non-EC countries.

The United States is a major supplier of animal feed (9 percent), oilseeds (33 percent), and tobacco (11 percent). UK imports of U.S. meat and meat products fell to $7.4 million in 1989, down from $30 million the previous year, due to the EC ban on hormone-treated meat. This situation is unlikely to be reversed in the near term.

Trade policy and prospects

Agricultural trade issues are coming increasingly to the fore as the single European market (scheduled for the end of 1992) approaches. As an EC member, the United Kingdom will follow EC law.

In the livestock sector, the upgrading to EC standards for slaughterhouses will preoccupy the industry in 1991. Such common inspection mechanisms and other common standards can be expected to be required of exporters to the UK in the future.

This issue is likely to become a point of friction between the EC and its trading partners. The outcome of GATT agricultural negotiations and the reform of the EC Common Agricultural Policy will determine the new course of British agriculture. ■

Venezuela

V

Profile of agriculture

Agriculture is an important component of Venezuela's economy, even though it employs only 13 percent of the labor force and accounts for only about 6 percent of the gross domestic product. The average farm size is 80 hectares.

Agriculture is significant in the northern third of the country, where most crops are grown. The dominant crops are white corn, sugar, sorghum, rice, oilseeds, and vegetables. Dairy and broiler production is also significant.

The flat central third of the country is devoted to cattle raising. This area has a wet/dry pattern and suffers extremes of precipitation. Most of the southern third of the country consists of tropical forests and the lowlands of the Orinoco River and supports little agricultural activity.

Production highlights

In 1989, agricultural output decreased by nearly 6 percent (only slightly better than the 8-percent drop in the overall economy), and the general contraction in agriculture was reflected in the performance of the most important crops. Preliminary estimates for 1990 indicate little or no growth in agriculture.

In 1989/90, a combination of factors affected corn and sorghum planting. A currency devaluation in February 1989 pushed prices of agricultural inputs up, while agricultural interest rates soared from 8 percent to more than 40 percent and an extended dry spell affected the most important production areas. White corn production dropped by nearly 30 percent from the previous season, and imports of yellow corn were permitted for the first time in 4 years. Sorghum production fell to its lowest level in several years.

Rice is the only traditional grain crop that showed a consistent increase in output over the past few years. In recognition of the natural advantage of rice over other traditional crops, the Government raised prices, increased resources for agricultural credits, and improved rice research programs. Favored with the best irrigated land in Venezuela, producers have been able to boost productivity.

Rice and white corn flour have displaced wheat as the most important food grains in the Venezuelan diet. The elimination of the preferential rate for wheat imports caused a substantial increase in the retail prices of wheat products. A 300-percent price hike for pasta and bread sent consumption down by an average of 30 percent as consumers shifted to the less expensive precooked corn flour and rice.

Coffee production continued its downward trend as prices for agricultural inputs rose and the Government reduced subsidies on credit and fertilizers to the thousands of small farmers who make up the majority of the producers.

Agricultural Production

	1988	*1989*
	mil. metric tons	
Crop production		
Cereals	2,485	1,685
Cocoa	14	14
Coffee	71	72
Fruits	2,441	2,420
Oilseeds and textiles	358	326
Pulses	50	45
Roots and tubers	671	685
Sugarcane	8,332	7,809
Tobacco	15	14
Vegetables	385	330
	mil. head	
Livestock numbers		
Broilers	250.8	204.1
Cattle	1.8	1.9
Hogs	2.5	1.5

Venezuela at a Glance

Population (1990): 20.1 million
Urban population: 87%
Population growth rate: 2.6%
Per capita income (1990): $1,995
Total land area: 912,050 square kilometers; 30-35% agricultural
Major crops: Corn, rice, sugar, sorghum, coffee, cocoa
Livestock sector: Poultry, cattle, hogs
Leading agricultural exports: Coffee, cocoa, cigarettes, plantains, mangoes
Leading agricultural imports: Wheat, feed grains, vegetable oils, soybean meal and cake, whole dry milk, barley malt, pulses
Agricultural imports as a share of total imports: 11%
U.S share of total agricultural imports: 58%
Percent of labor force in agriculture: 13%
Membership in economic or trade organizations: ALADI, Andean Pact, GATT, ICO, OAS, OPEC, SELA

Production of cocoa beans rose in 1989 for the first time in 3 years as better weather, higher prices, and a falloff in construction-related jobs encouraged renewed interest in the crop on the part of small farmers.

Sugar output declined in 1989, as low prices encouraged many producers to shift to other crops. Although the Government set a new price to boost production, 9 percent of the total crop area was lost. Venezuela imports about 30 percent of its sugar, with Cuba as a major supplier.

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Barley malt	47	2
Live bovines	10	80
Pulses	26	38
Sorghum	109	100
Soybeans	18	100
Soybean meal and cake	103	92
Tallow	11	100
Vegetable oils	103	56
Wheat	144	77
Whiskey	28	0
Whole dry milk	89	0
All agricultural products[2]	800	58

[1] *Values are shown in U.S. dollars at U.S.$1=40.5 bolivars. Includes commercial and concessional imports.*
[2] *Includes products not listed above. Excludes forest products.*

Venezuela's oilseed output increased in 1989, as higher yielding strains replaced less productive traditional varieties and crushers offered excellent credit programs. Sesame, the traditional oilseed, was replaced by sunflower as the country's primary oilseed. Cottonseed remained a distant third, while soybeans continued as an experimental crop supported by research grants.

In 1989/90, the Venezuelan oilseed crush reached about 1 million tons; locally produced seed accounted for about two-thirds of this total. Despite the large sums invested in oilseed production, imports continue to provide nearly three-quarters of the country's vegetable oil and meal.

The livestock and hog industries had a difficult year in 1989. Hog producers reduced inventories by one-half and sold out as feed prices surged after preferential exchange rates were eliminated. The cattle industry enjoyed increased demand as grass-fed beef became much more competitive with grain-fed pork and poultry.

Farm and food policy

The Venezuelan Government is striving to develop a comprehensive agricultural policy that will help producers and at the same time promote international competition and encourage productivity. The long-term goal of self-sufficiency no longer seems to be the main Government objective; rather, the focus has shifted to producing crops in which Venezuela has a comparative advantage.

Interest rates for agricultural loans are now almost as high as those for nonagricultural loans. This increase has been a severe shock to Venezuelan farmers, and financing has become the deciding factor for many crops. The devaluation of Venezuela's currency, the *bolivar*, and the elimination of most subsidies have raised prices for imports such as pesticides and agrochemicals as much as 500 percent.

Technical assistance to farmers is scarce. Traditional crops such as coffee, cocoa, corn, and sorghum continue to suffer from low or declining yields because farmers have not adopted improved cultivation practices.

A large percentage of the Venezuelan population is critically poor. Concern about inflation and its effect on this segment of the population makes it hard for the Government to favor local production against inexpensive imports that help to maintain low food prices for consumers.

Imports and exports

Venezuela is a net agricultural importer. Imports of agricultural products have traditionally averaged over $1 billion, but the severe recession and devaluation of the currency in 1989 led to a decrease in imports to $800 million. Exports, totaling approximately $200 million, have been mostly limited to coffee, cocoa, and tropical fruits.

Agricultural imports are composed mostly of feed grains (corn and sorghum), wheat, soybean meal, and vegetable oils. Venezuela imports 70 percent of its vegetable oils and 60 percent of its feed grains.

Because of the proximity of Gulf ports and a long trading history, the United States traditionally has been Venezuela's largest single supplier, accounting for slightly over 50 percent of agricultural imports. However, imports from the United States dropped sharply to $464 million in 1989 (down from $749 million in 1988), and a further drop was projected for 1990.

Trade policy and prospects

In 1989, the Government of Venezuela began revising its international trade policy, dropping tariff levels considerably and eliminating import restrictions for all products except grains, oilseeds and related products, dairy products, and sugar. This process was sparked by the country's entrance into the General Agreement on Tariffs and Trade (GATT) in September 1990.

Trade liberalization is scheduled to continue until 1993, with further reductions in tariff levels. It is expected that most import restrictions that apply to grains, oilseeds and products, dairy products, and sugar will be replaced with mechanisms that will eliminate quantitative restrictions. ■

Yugoslavia

Y

Profile of agriculture

Agriculture contributes about 10 percent of the Yugoslav gross national product and employs about 20 percent of the labor force.

Two-thirds of agricultural production comes from the private sector, where farmers hold 83 percent of the arable land and make up over 90 percent of the agricultural labor force.

The maximum allowable size of a private farm has been increased from 10 to 30 hectares since 1988, but the average is still only about 3.3 hectares.

The socialized sector includes over 2,700 vertically integrated conglomerates, known as *kombinats*, which are self-managed enterprises and are not owned by the state. They are required to operate at a profit, but they do receive subsidies for certain inputs and unprofitable lines of production.

The socialized sector is mainly involved in large-scale production of grains, oilseeds, sugar beets, hogs, and poultry. The more labor-intensive products are left to the private sector.

Agricultural Production

	1989	*1990*
	thous. metric tons	
Crop production[1]		
Corn	9,415	6,616
Potatoes	2,359	2,245
Soybeans	209	152
Sugar beets	6,797	5,915
Sunflowerseed	420	422
Tobacco	63	46
Wheat	5,599	6,359
	thous. head	
Livestock numbers[2]		
Cattle	4,759	4,702
Hogs	7,396	7,231
Poultry	74,872	73,524
Sheep	7,564	7,596
	thous. metric tons	
Animal product output		
Beef and veal	309	302
Eggs[3]	4,612	4,600
Milk		
Cow	4,599	4,510
Sheep	148	147
Mutton and lamb	69	69
Pork	791	771
Poultry meat	310	312

[1] *Crop years vary by commodity.*
[2] *Estimates as of January 15 each year.*
[3] *Million eggs.*

Production highlights

Yugoslavia's agricultural production in 1990 was estimated to have declined by 7 percent because of a prolonged summer drought. Significant declines occurred for nearly all major crops except wheat, which was up 12 percent to a new record high. Sunflowerseed output was basically unchanged.

Spring-planted crops were hard hit by the drought. Output of corn in the 1990/91 marketing year (October-September) was estimated at 6.6 million tons, down 30 percent from 1989/90 and the lowest in two decades. As a result, total grain production reached only 14 million tons in 1990/91, compared with 16.1 million in 1989/90.

Production of soybeans and sugar beets declined 27 percent and 13 percent, respectively. There were also significant decreases for fruits, vegetables, and tobacco.

Because of the Government's restrictive monetary policy, the availability of credit to processors of industrial crops such as sugar beets and oilseeds was especially tight in 1990, resulting in delays in payment to farmers for their crops. These delays resulted in protests by farmers and may reduce 1991 plantings of crops such as sugar beets and oilseeds that are sold to processors.

Livestock numbers have stabilized after declining during the second half of the 1980's. At the beginning of 1991, numbers were only slightly below the 1990 level. Large imports of corn and soybean meal suppressed feed price increases; thus, a mild expansion in livestock numbers could begin in 1991.

Yugoslavia at Glance

Population (1990): 23.8 million
Urban population: 47%
Population growth rate: 0.6%
Per capita income (1990): $3,919
Total land area: 255,804 square kilometers; 55% agricultural use
Major crops: Corn, wheat, potatoes, sunflowerseed, sugar beets, soybeans, fruits
Livestock sector: Hogs, poultry, cattle, sheep, horses
Leading agricultural exports: Live animals and livestock products, fruits and vegetables, wine, tobacco
Leading agricultural imports: Meat and meat products, coffee, cotton, wool, tropical fruits, soybeans and meal, hides and skins
Agricultural imports as a share of total imports: 11%
U.S. share of total agricultural imports: 6%
Percent of population in agriculture: 19%
Membership in economic and trade organizations: GATT, IBRD, IDA, IDB, IFAD, IMF

Farm and food policy

The Government plays a significant role in supporting agricultural production, and its farm policy has two key

Value of Agricultural Imports, 1989

	Total imports	*U.S. share*
	$ mil.[1]	*%*
Selected products		
Animal oil and fats	10	20
Beef	65	2
Cotton	191	7
Corn	10	10
Hides and skins	98	3
Soybean meal	51	37
Soybeans	75	55
Tobacco	22	18
Wheat	3	67
All agricultural products[2]	1,682	6

[1] *Values are shown in U.S. dollars at U.S.$1=3.113 dinars.*
[2] *Includes commercial and concessional imports and products not listed. Excludes forest products.*

elements. The first is a minimum support price guaranteed to the producers of wheat, corn, sunflowerseed, sugar beets, soybeans, tobacco, milk, and fattened livestock (cattle, hogs, and sheep).

The second part of the policy involves subsidies: direct payments are made to exporters; farm prices of fertilizers, pesticides, and seeds are reduced by Government payments to manufacturers; and financing for agricultural production credit is made available at reduced rates. Since 1990, private farmers have been given the same credit and tax benefits as the socialized sector.

In 1991, the Government may replace direct payments to producers of fertilizers, pesticides, and seeds with a system of cash premiums for agricultural products (except corn and wheat) that are currently under the Government's minimum support price system.

If this change occurs, it is expected that farmers will use fewer chemical inputs because their prices will increase after subsidies are removed. As a result, yields may decline in 1991 even though area planted may increase slightly.

Imports and exports

In 1989, Yugoslavia was a net agricultural importer, with imports of $1.7 billion and exports of $1.4 billion. An estimated 6 percent of agricultural imports, by value, came from the United States.

Agricultural imports in 1990 were led by meat and meat products, followed by fruits and vegetables, cotton, coffee, soybeans, and soybean meal. A significant part of these imports was encouraged by the Government to reduce domestic prices through import competition.

A below-average corn crop necessitated imports of about 1.1 million tons of corn in 1990, most coming from the United States.

Yugoslav imports of soybean meal more than doubled in 1989/90, primarily because of the liberalized meal import policy during the first 8 months of 1990. Since October 1990, the Government has imposed a more protective import regime for soybean meal. Meal imports are expected to drop to about 200,000 metric tons in 1990/91. Meanwhile soybean imports will probably climb to 260,000 metric tons.

The U.S. share of Yugoslavia's total agricultural imports is estimated to have increased in 1990 because of expanded sales of soybeans, soybean meal, and corn.

Yugoslav exports of livestock and meat products in 1990 were down by about 19 percent from the 1989 record level of $476 million. Italy and Greece continued to be the largest buyers, taking about 60 percent of total exports.

The record 1990/91 wheat crop created a relatively large exportable surplus; however, Yugoslav wheat has been priced at almost twice the world market price, which has severely reduced export possibilities. As a result, Yugoslavia is projected to export only about 50,000 metric tons of wheat in 1991, compared with 300,000 metric tons exported in 1990.

Trade policy and prospects

The Government continues to pursue a liberalization policy designed to reduce inflation and improve domestic productivity through import competition. Currently about 90 percent of all agricultural imports enter without any quantitative restrictions, but they are subject to import duties and fees of between 15 and 30 percent.

A number of major agricultural and food commodities (livestock, meat, milk, wheat, wheat flour, corn, oilseeds) are additionally protected by border charges, quotas, and import surcharges. ■

Zimbabwe

Profile of agriculture

Agriculture is the backbone of the economy, despite the country's susceptibility to drought. Zimbabwe has relative economic and political stability and a high degree of food self-reliance. It is a middle-income country in which agriculture accounts for about 25 percent of the gross domestic product.

Agricultural Production

	1988	*1989*
	thous. metric tons	
Crop production		
Coffee	13	11
Corn	2,253	2,352
Cotton	319	262
Peanuts	135	132
Soybeans	120	116
Sunflowerseed	65	51
Tobacco	124	135
Wheat	256	275

	1988
	mil. head
Livestock numbers[1]	
Cattle	
Beef	5.79
Dairy	0.12
Goats	2.32
Hogs	0.22
Poultry	
Broilers	9.46
Layers[2]	0.64

	thous. metric tons
Animal product output	
Beef	97.8
Broilers[3]	15.9
Butter[4]	42.8
Cheese[4]	15.9
Milk[4]	177.0
Pork	10.0

[1] *Mid-July estimates.*
[2] *Only registered flocks included. There are many unregistered producers. Total poultry flock is estimated at 24 million birds.*
[3] *Includes culls and roasters.*
[4] *Million liters.*

The country has a small modern agricultural sector and a large communal one. The later has become more important in cash crop production—cotton and tobacco—rather than subsistence crops. The most important crops in terms of tonnage are corn, cotton, wheat, sorghum, peanuts, soybeans, tobacco, sunflowerseed, and coffee. Corn is the most important food crop.

Horticulture is one of the fastest growing sectors of Zimbabwe's agricultural industry. Flowers, for example, are flown to Europe for marketing in Holland. Vegetables are marketed in Europe, the Far East, and South Africa. As for citrus, some producers, particularly those along the country's southern borders, have a marketing arrangement with the South African Citrus Exchange. Zimbabwe's citrus is ready for marketing a month ahead of South Africa's and, therefore, Zimbabwe's produce complements South Africa's rather than competes with it.

Two major constraints to further expansion of the industry are a lack of refrigerated storage space and transport shortages. However, the Government is now permitting horticultural producers to retain 7 percent of their foreign exchange earnings, and it is hoped that these earnings will support larger imports of goods and materials needed for cold-room facilities.

Varied ecological conditions allow Zimbabwe to grow a wide variety of crops; however, about three-quarters of the country is dry and best suited to extensive livestock and wild game ranching. Cattle provide draft power as well as meat.

Production highlights

The marked increase in volume and value of agricultural production achieved in 1988/89 was not repeated in 1989/90.

Zimbabwe at a Glance

Population (1990): 9.7 million
Urban population: 28%
Population growth rate: 3.3%
Per capita income (1990): $625
Total land area: 390,580 square kilometers; 7% arable, 12% animal production, 62% forest and woodlands, 19% other
Major crops: Corn, cotton, wheat, sorghum, peanuts, soybeans, tobacco, sunflowerseed, coffee
Livestock sector: Poultry, beef cattle, sheep, hogs, dairy cattle
Leading agricultural exports: Tobacco, cotton, meat, sugar
Leading agricultural imports: Wheat (mostly barter)
Agricultural imports as a share of total imports: Negligible
U.S. share of total agricultural imports: Negligible
Percent of labor force in agriculture: 70%
Membership in economic or trade organizations: ACP, Commonwealth, GATT, IBRD, IMF

The 1988/89 season saw a dry summer for most farmers, with southeast Zimbabwe experiencing another drought, its seventh in a decade.

Output of most Government-controlled products, excepting only sunflowerseed and wheat, declined during 1989/90. Domestic wheat production rose to over 300,000 tons. This was the closest to self-sufficiency that Zimbabwe has ever come; however,

further production gains will require the Government to continue raising prices annually to retain good viability in the wheat industry.

In contrast to the declines in output of most Government-controlled products, both the quantity and value of burley and flue-cured tobaccos, which are not controlled, rose. Increases in the price of tobacco are fueling an expansion in production. Tobacco exports account for nearly a fourth of Zimbabwe's foreign currency earnings.

Cattle slaughter dropped a further 27 percent in 1989 after declining 16 percent in 1988 because of foot-and-mouth disease and the consequent loss of export markets.

Milk production is slowly increasing. Efforts to expand the capacity to produce processed dairy products are continuing.

Farm and food policy

Major policy objectives are to maintain low consumer food prices, encourage food self-sufficiency, provide adequate returns to producers, and promote export earnings. The approach has been to preserve the productivity of commercial agriculture while emphasizing improved performance in the communal sector, especially cotton, tobacco, and corn.

In the early 1980's, problems associated with the global recession and the African drought led Zimbabwe to undertake an adjustment program to reduce the budget deficit, limit short-term external debt and domestic credit, and restrict wage and salary increases. However, this adjustment program compounded difficulties in achieving longer term goals related to employment, training, research, and reducing the income gap between commercial and communal farming.

The Agricultural Marketing Authority coordinates operations of the Grain, Cotton, and Dairy Marketing Boards and the Cold Storage Commission. This authority promotes efficient marketing of all controlled or regulated agricultural commodities and advises the Government on commodity prices, including guarantees and subsidies.

Government commodity marketing boards control production and trade. Substantial subsidies are required for corn, beef, and dairy products. The Government has sought to reduce corn and milk production in the commercial sector because of unprofitable surpluses. The Grain Marketing Board also oversees capital improvement for bulk handling and storage facilities.

The Government sets selling prices with the primary objection of keeping consumer prices low. Efforts to reduce food subsidies by gradually increasing consumer prices are being hampered somewhat by inflation.

Farm equipment is a serious problem. Tractors, combines, pickup trucks, and motorbikes are all in short supply, and spare parts for farm machinery are difficult to obtain. In 1989, suppliers of inputs to the agricultural industry were allocated more foreign currency as part of the Government's Export Promotion Program, which is helping to alleviate the equipment problem.

Imports and exports

Because of foreign exchange constraints, agricultural imports are minimal with the exception of wheat, which is mainly bartered for corn. Although cereal production has grown in recent years when there was good rainfall, the annual population growth of over 3 percent has caused per capita cereal production to decline almost 2 percent per year.

A marginal overall increase in agricultural exports, led by tobacco and corn, was recorded in 1988, while meat products declined.

Export earnings during 1988 totaled $544,000 and were expected to increase in 1989 as a result of increased tobacco production. Meat product exports, however, were expected to decline drastically because of foot-and-mouth disease.

Trade policy and prospects

Zimbabwe's greatest barrier to imports is its acute shortage of foreign currency, but it also has various nontariff barriers to trade. For example, all imported agricultural products are subject to licensing requirements. Although the country does not have a year-round quota system, it restricts certain agricultural products seasonally. In addition, most agricultural products and processed foods require special import permits.

In order to maintain its competitive position on the world export market, the Government of Zimbabwe devalues the Zimbabwe dollar against a basket of major currencies by 15 to 25 percent annually.

The United Kingdom ranks as Zimbabwe's major destination for exports, with South Africa and West Germany close behind. However, South Africa has the advantage of proximity and could replace the United Kingdom in the near future.

Barter has been important in the export marketing of tobacco and the importing of wheat. The Zimbabwe Tobacco Association, however, would like to see barter trade reduced and replaced by cash sales. Tobacco production and exports continue to increase, and producer returns are increasing faster than inflation. ■

Glossary of International Trade Acronyms

ACC, Arab Cooperation Council

ACP, African, Caribbean, and Pacific countries associated with the EC

ADB, Asian Development Bank

AFDB, African Development Bank

AID, Agency for International Development (U.S.)

ALADI, Latin American Integration Association (also abbreviated LAIA)

ANRPC, Association of Natural Rubber Producing Countries

APEC, Asian-Pacific Economic Cooperation

ASEAN, Association of Southeast Asian Nations

Benelux, Belgium, Netherlands, Luxembourg Economic Union

BLEU, Belgium-Luxembourg Economic Union

CACM, Central American Common Market

CAP, Common Agricultural Policy (EC)

CARICOM, Caribbean Common Market

CBI, Caribbean Basin Initiative

CCC, Commodity Credit Corporation, USDA; also Customs Cooperation Council

CEMA, Council for Mutual Economic Assistance

CER, Australia-New Zealand Closer Economic Relations

c.i.f., Cost, insurance, and freight

EAC, East African Community

EC, European Community

ECLA, Economic Commission for Latin America (UN)

ECOWAS, Economic Community of West African States

ECU, European Currency Unit

EEP, USDA Export Enhancement Program

EFTA, European Free Trade Association

EMS, European Monetary System

ESCAP, Economic and Social Commission for Asia and the Pacific (UN)

EXIM Bank, Export-Import Bank (U.S.)

FAO, Food andAgricultureOrganization(UN)

FAS, Foreign Agricultural Service, USDA

FOB, Free on board

FTA, Free-trade agreement; also, free-trade area

GATT, General Agreement on Tariffs and Trade

GCC, Gulf Cooperation Council

GDP, Gross domestic product

GNP, Gross national product

GSM-102, GSM-103, USDA Export Credit Guarantee Programs

GSP, Generalized System of Preferences

IBRD, International Bank for Reconstruction and Development (The World Bank)

ICA, International Coffee Agreement; also, International Cocoa Agreement

ICAC, International Cotton Advisory Committee

ICCO, International Cocoa Organization

ICO, International Coffee Organization

IDA, International Development Association (associated with The World Bank); also, International Dairy Arrangement

IDB, Inter-American Development Bank; also, Islamic Development Bank

IFAD, International Fund for Agricultural Development (UN)

IFC, International Finance Corporation (associated with The World Bank)

IMF, International Monetary Fund (UN)

INRO, International Natural Rubber Organization

IOOC, International Olive Oil Council

IRC, International Rice Council

ISO, International Sugar Organization

ITA, International Trade Administration, U.S. Department of Commerce

ITC, International Trade Commission (U.S.)

IWC, International Wheat Council

LAFTA, Latin American Free Trade Area

LAIA, See ALADI

LDC, Less developed country

MFA, Multifiber Arrangement

MFN, Most favored nation

MTN, Multilateral Trade Negotiations

NIC, Newly industrialized country

NTB, Nontariff barrier

OAPEC, Organization of Arab Petroleum Exporting Countries

OAS, Organization of American States

ODECA, Organization of Central American States

OECD, Organization for Economic Cooperation and Development

OPEC, Organization of Petroleum Exporting Countries

OPIC, Overseas Private Investment Corporation (U.S.)

P.L. 480, U.S. Public Law 480, Agricultural Trade Development and Assistance Act

SAARC, South Asian Association for Regional Cooperation

SEED Act, Support for East European Democracies Act (U.S.)

SELA, Latin American Economic System

UNCTAD, UN Conference on Trade and Development

USEC, U.S. Mission to the European Communities

USTR, United States Trade Representative

VAT, Value-added tax

WSG, International Wool Study Group

Need definitions of trade terms?

Consult the FAS *Dictionary of International Agricultural Trade.* This 96-page reference provides concise definitions of common terms used in agricultural trade, as well as brief descriptions of many regional and international trade organizations.

For a free, single copy, write:

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Ask for the *Dictionary of International Agricultural Trade* (Agricultural Handbook No. 411). Supplies are limited.

Atlas of World Agriculture

Contents

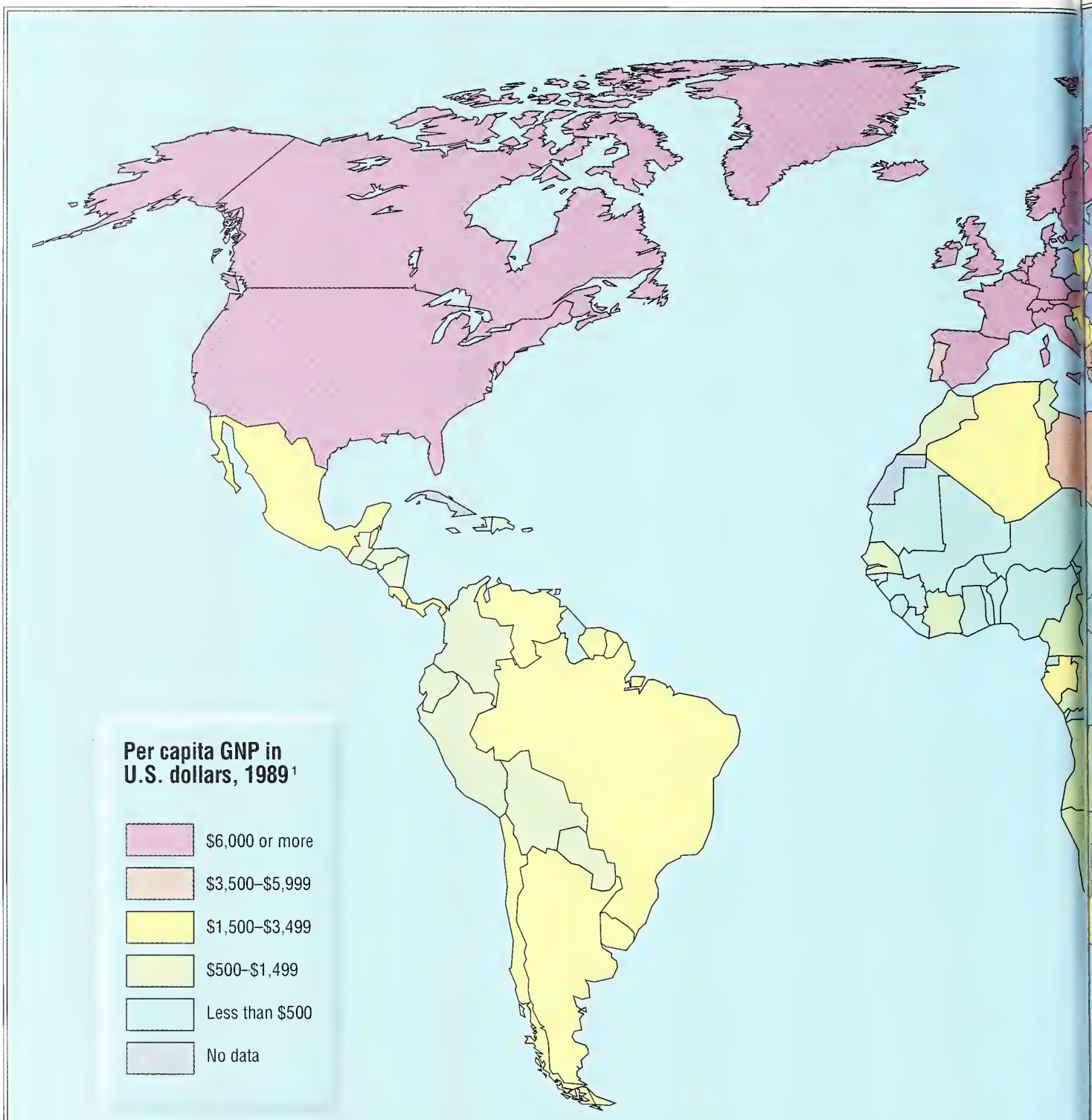
The following section presents a visual guide to world agriculture. Every effort was made to obtain accurate, complete, and up-to-date information. However, because of differences among data sources and the lack of reliable statistics on many countries, the reader may find some inconsistencies and omissions. Boundary representations on the maps are not necessarily authoritative, and inclusion of disputed boundaries does not imply official U.S. recognition. The maps identified by a copyright symbol may not be reproduced without permission from the originating source.

World Map and Time Zones

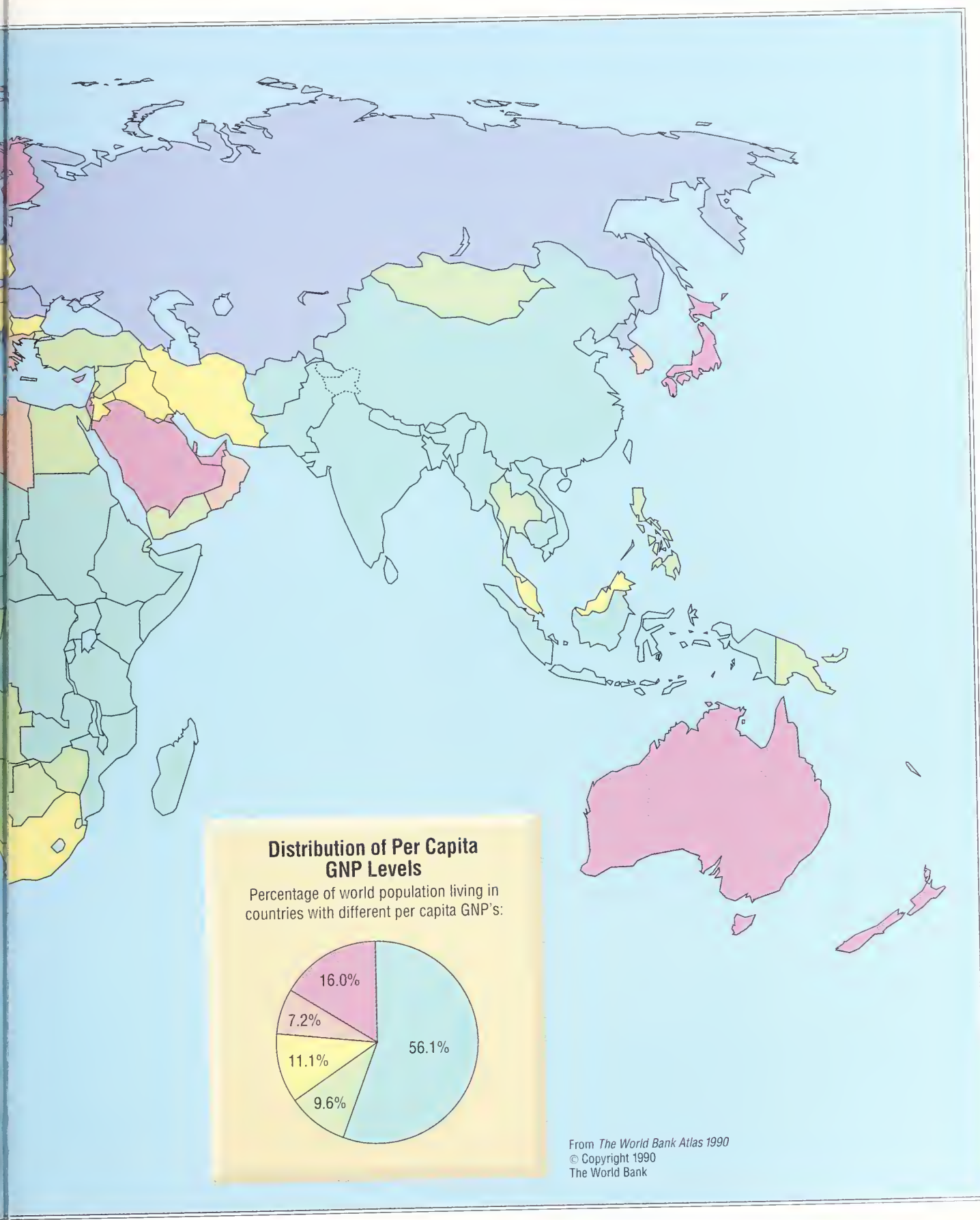
(All boundary representations are approximate. Most small islands and island nations are not shown.)


NORWAY
SWEDEN
FINLAND
DENMARK
GERMANY
POLAND
CZECH
AUSTRIA
HUNGARY
ROMANIA
YUGO.
BULGARIA
ITALY
ALBANIA
GREECE
TURKEY
TUNISIA
LEBANON
ISRAEL
SYRIA
IRAQ
JORDAN
IRAN
8:30
KUWAIT
BAHRAIN
QATAR
U.A.E.
SAUDI ARABIA
LIBYA
EGYPT
NIGER
CHAD
SUDAN
YEMEN
DJIBOUTI
OMAN
NIGERIA
C.A.R.
CAMEROON
ETHIOPIA
SOMALIA
UGANDA
KENYA
CONGO
GABON
ZAIRE
RWANDA
BURUNDI
TANZANIA
ANGOLA
ZAMBIA
MALAWI
ZIMBABWE
MOZAMBIQUE
MADAGASCAR
NAMIBIA
BOTSWANA
SWAZILAND
LESOTHO
SOUTH AFRICA
SOVIET UNION
Tue.
6:00 a.m.
MONGOLIA
CHINA
N. KOREA
S. KOREA
JAPAN
AFGHANISTAN
9:30
PAKISTAN
NEPAL
10:40
BHUTAN
INDIA
10:30
BANGLADESH
BURMA
11:30
TAIWAN
HONG KONG
LAOS
VIETNAM
THAILAND
CAMBODIA
PHILIPPINES
SRI LANKA
10:30
BRUNEI
MALAYSIA
SING.
INDONESIA
PAPUA
NEW GUINEA
AUSTRALIA
2:30
NEW ZEALAND
Mon. 6 p.m.
Mon. 7 p.m.
Mon. 8 p.m.
Mon. 9 p.m.
Mon. 10 p.m.
Mon. 11 p.m.
Mon. 12 midnight
Tue. 1 a.m.
Tue. 2 a.m.
Tue. 3 a.m.
Tue. 4 a.m.
Tue. 5 a.m.
Mon.
Time shown in each zone
is standard time when it
is 12 noon EST in New York
International
Date Line

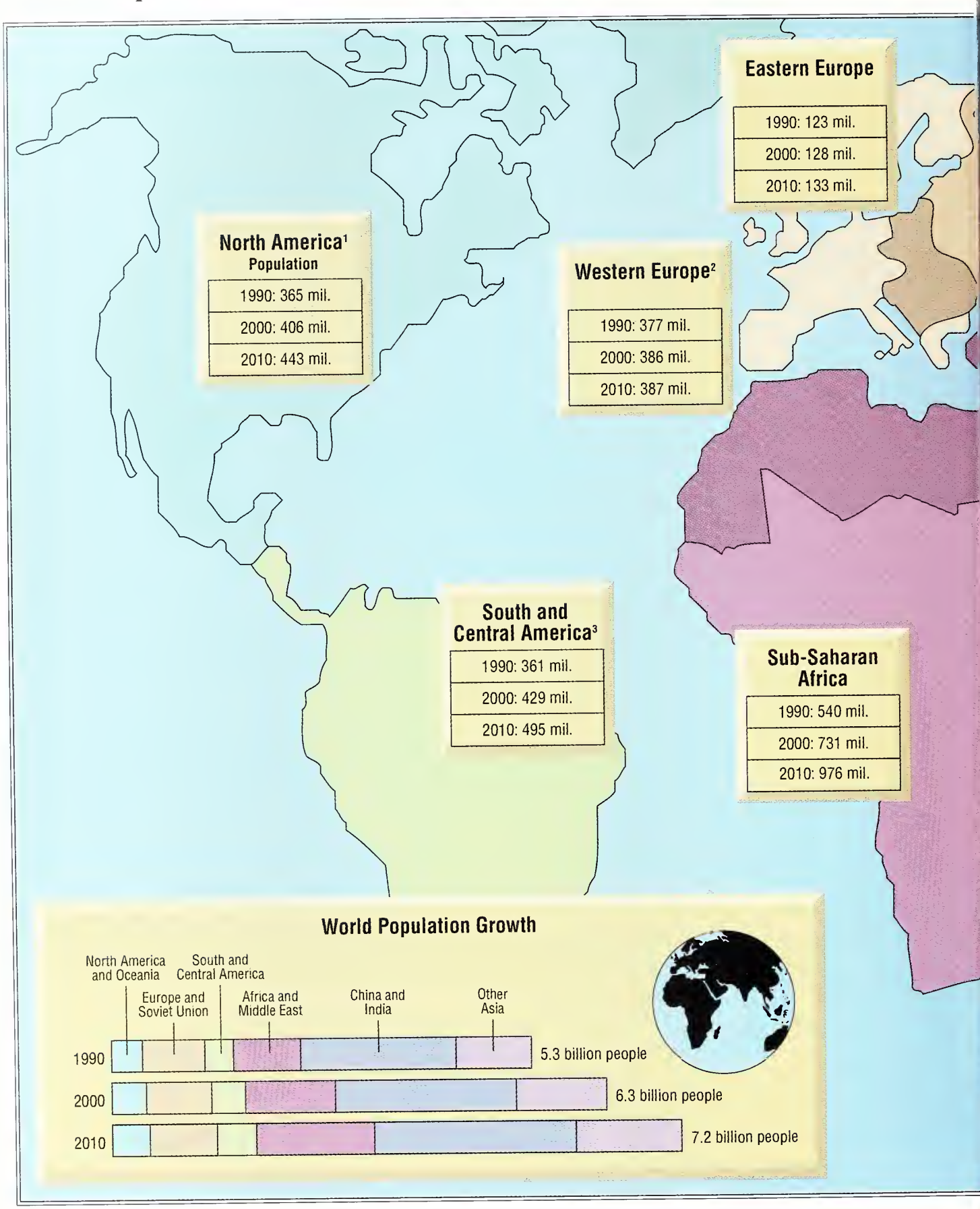
Per Capita GNP by Country

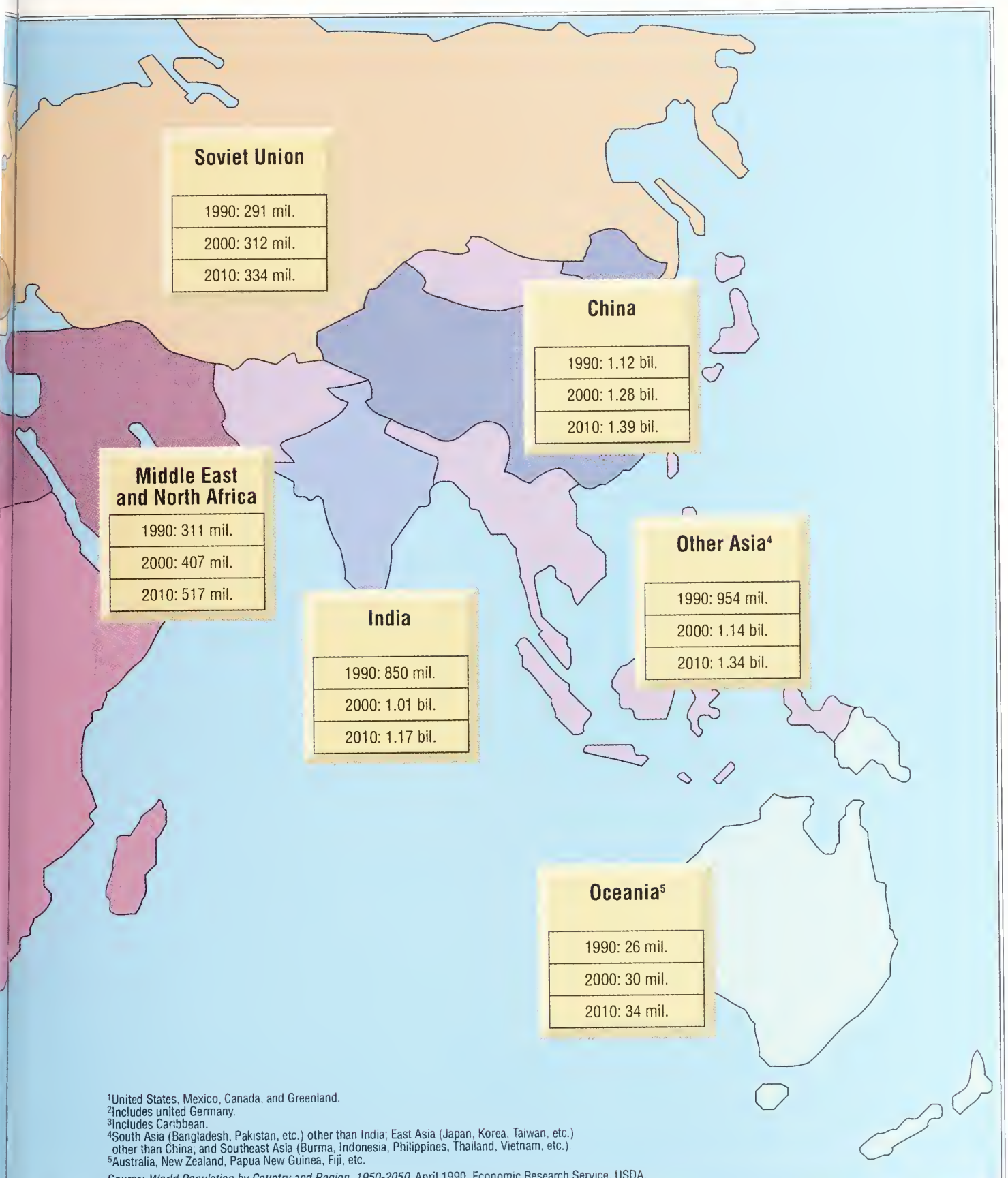


[1] Per capita GNP is a country's gross national product (value of all goods and services produced domestically, plus net income earned abroad) divided by population. Per capita GNP is often used as the equivalent of per capita income.



World Population Projections by Region

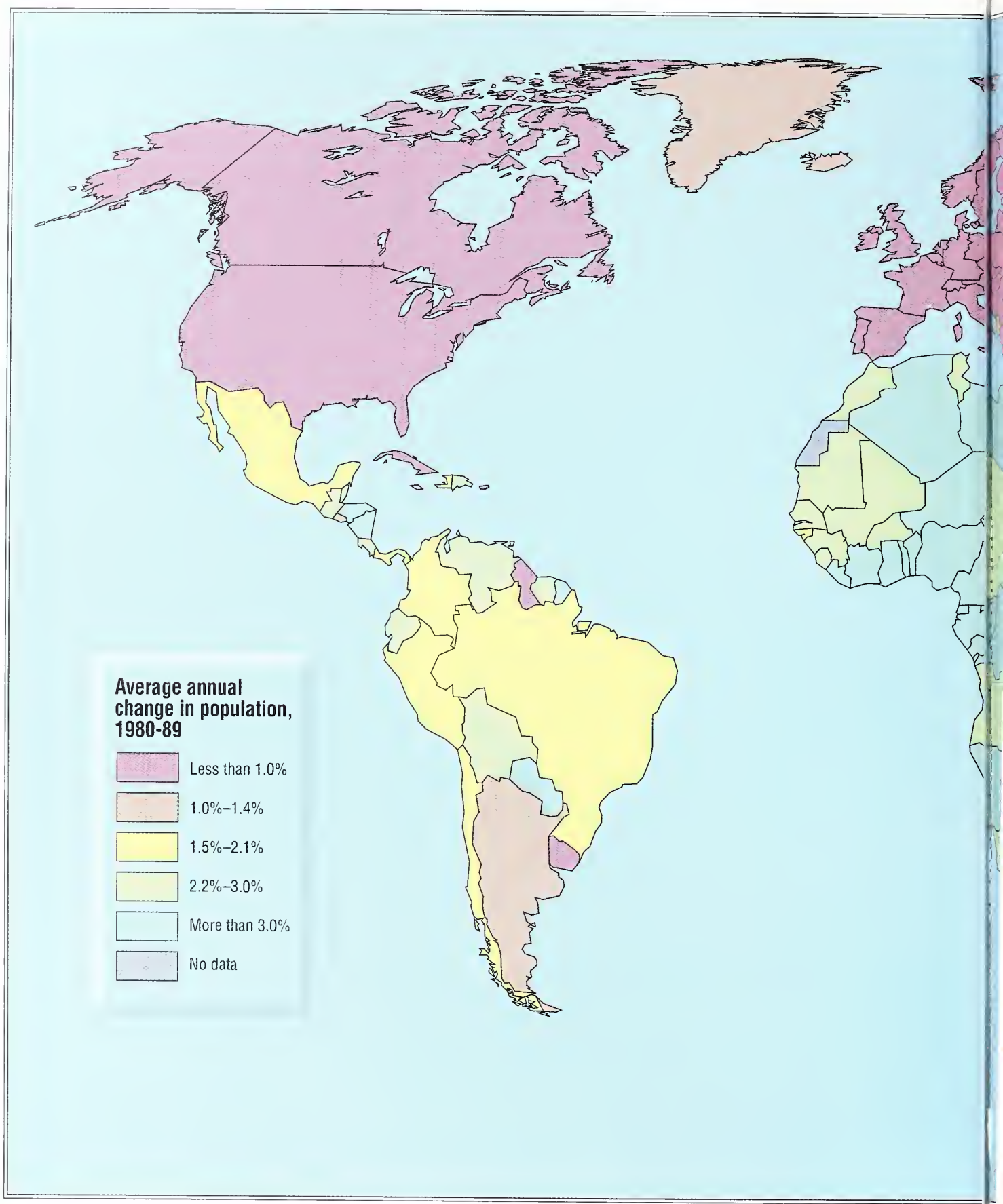


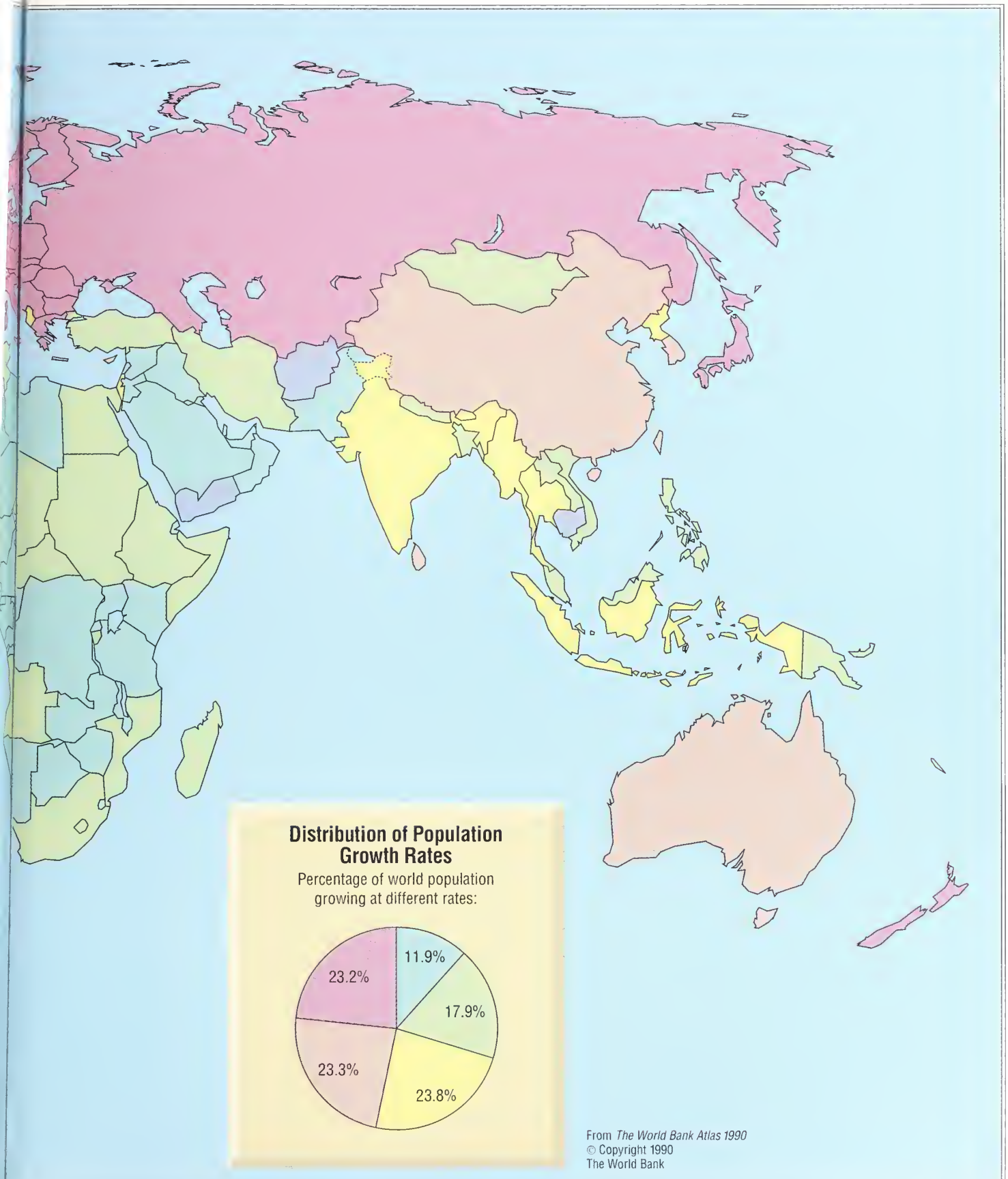


[1]United States, Mexico, Canada, and Greenland.
[2]Includes united Germany.
[3]Includes Caribbean.
[4]South Asia (Bangladesh, Pakistan, etc.) other than India; East Asia (Japan, Korea, Taiwan, etc.) other than China, and Southeast Asia (Burma, Indonesia, Philippines, Thailand, Vietnam, etc.).
[5]Australia, New Zealand, Papua New Guinea, Fiji, etc.

Source: *World Population by Country and Region, 1950-2050*, April 1990, Economic Research Service, USDA.

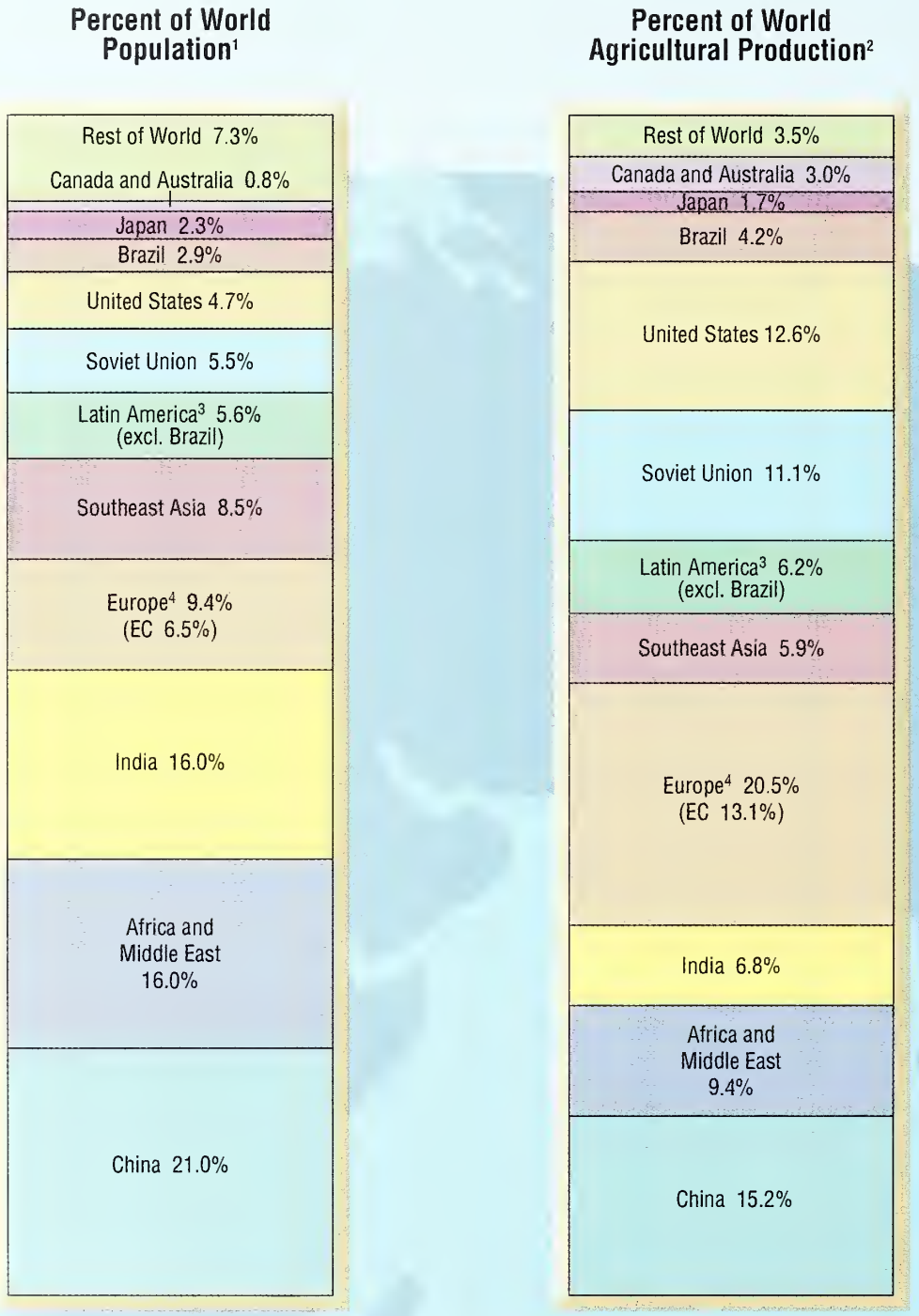
Population Growth Rates by Country





From *The World Bank Atlas 1990*

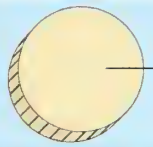
Comparisons of Population and Agricultural Production



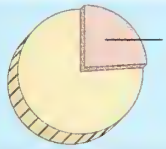
[1] Based on 1990 population estimates.
[2] Percentages are for 1988 and show estimated shares of world agricultural production, based on value of raw commodities produced (processed products excluded). Values are calculated using a single "world price" for each commodity. Thus, 1 ton of wheat has the same value no matter where it is produced. Source: *World Agriculture Trends and Indicators, 1970-89*, Economic Research Service, USDA, September 1990.
[3] Includes Mexico, South America, Central America, and Caribbean.
[4] Western and Eastern Europe. EC data are for 12 member nations of European Community.

Food Costs as a Share of Spendable Income

Averages for selected countries[1]

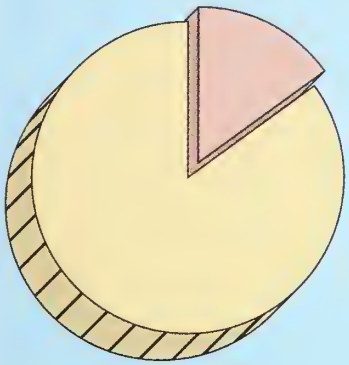


Total personal consumption expenditures per capita



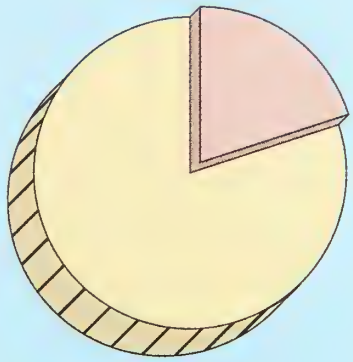
Percent spent on food and beverages[2]

15% or less



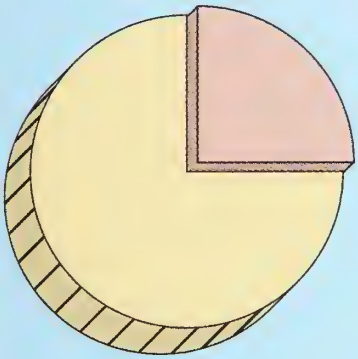
United States 12%
Canada 14%
United Kingdom 15%
New Zealand 15%

16%–20%



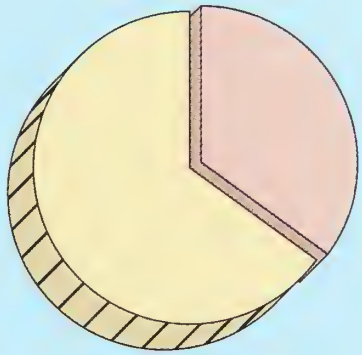
Luxembourg 16%
Netherlands 17%
Hong Kong 17%
Belgium 18%
France 19%
Denmark 19%
Australia 20%
Austria 20%
Sweden 20%

21%–25%



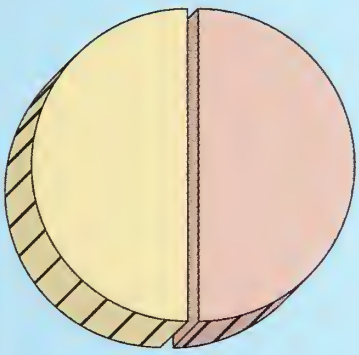
Bahamas 21%
Italy 21%
Finland 22%
Germany 22%
Norway 23%
Singapore 23%
Puerto Rico 24%

26%–35%



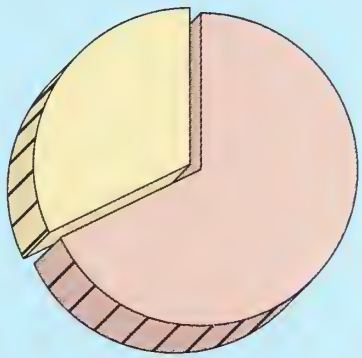
Israel 26%
Malaysia 26%
Switzerland 27%
Spain 28%
Venezuela 32%
Zimbabwe 32%
Peru 33%
Thailand 34%
Colombia 35%
South Africa 35%
Ecuador 35%

36%–50%



Ireland 36%
Greece 36%
Portugal 36%
South Korea 39%
Jordan 39%
Mexico 39%
Jamaica 44%
Japan 44%
Honduras 45%
Iran 47%
Sri Lanka 49%

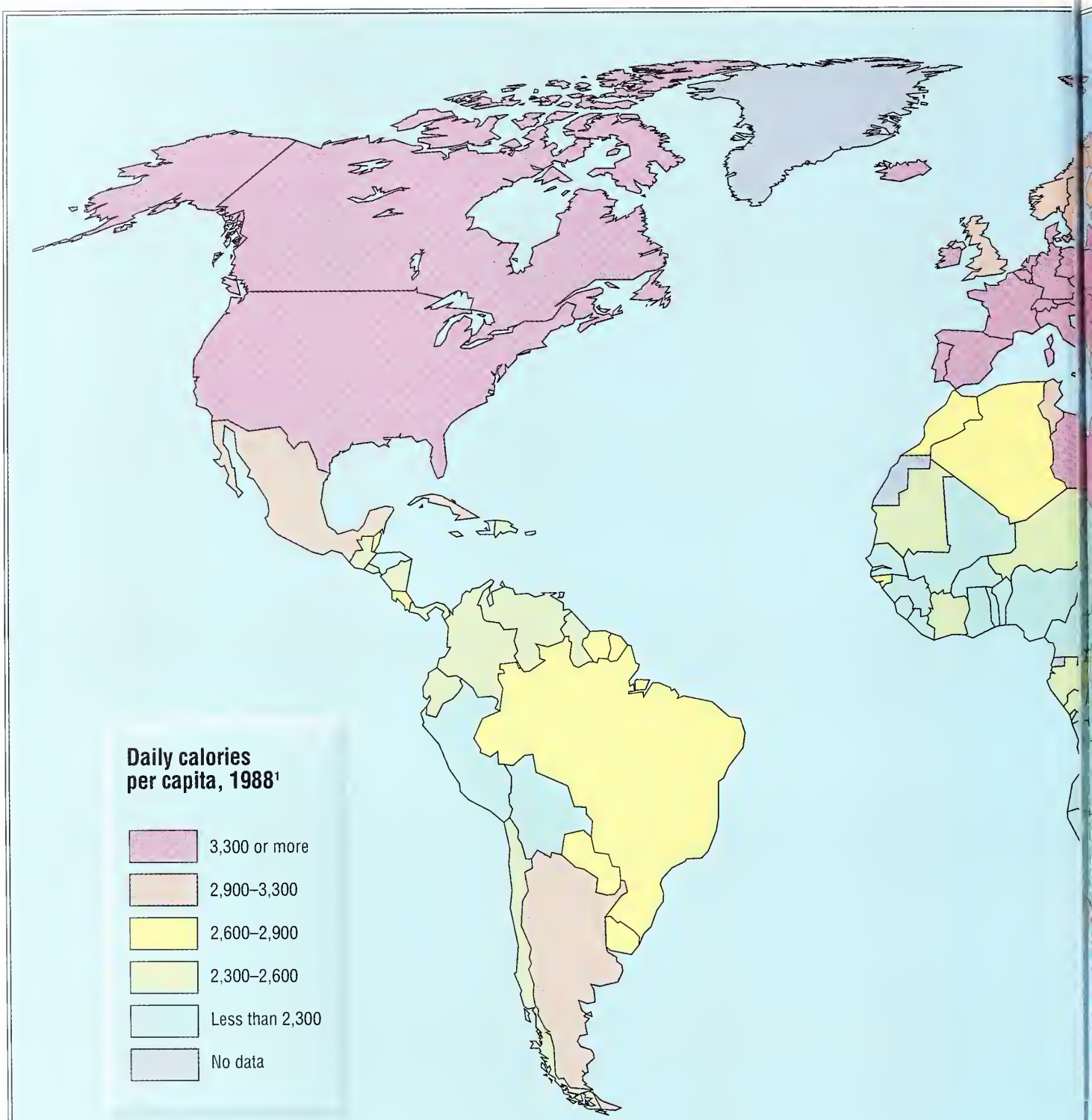
More than 50%



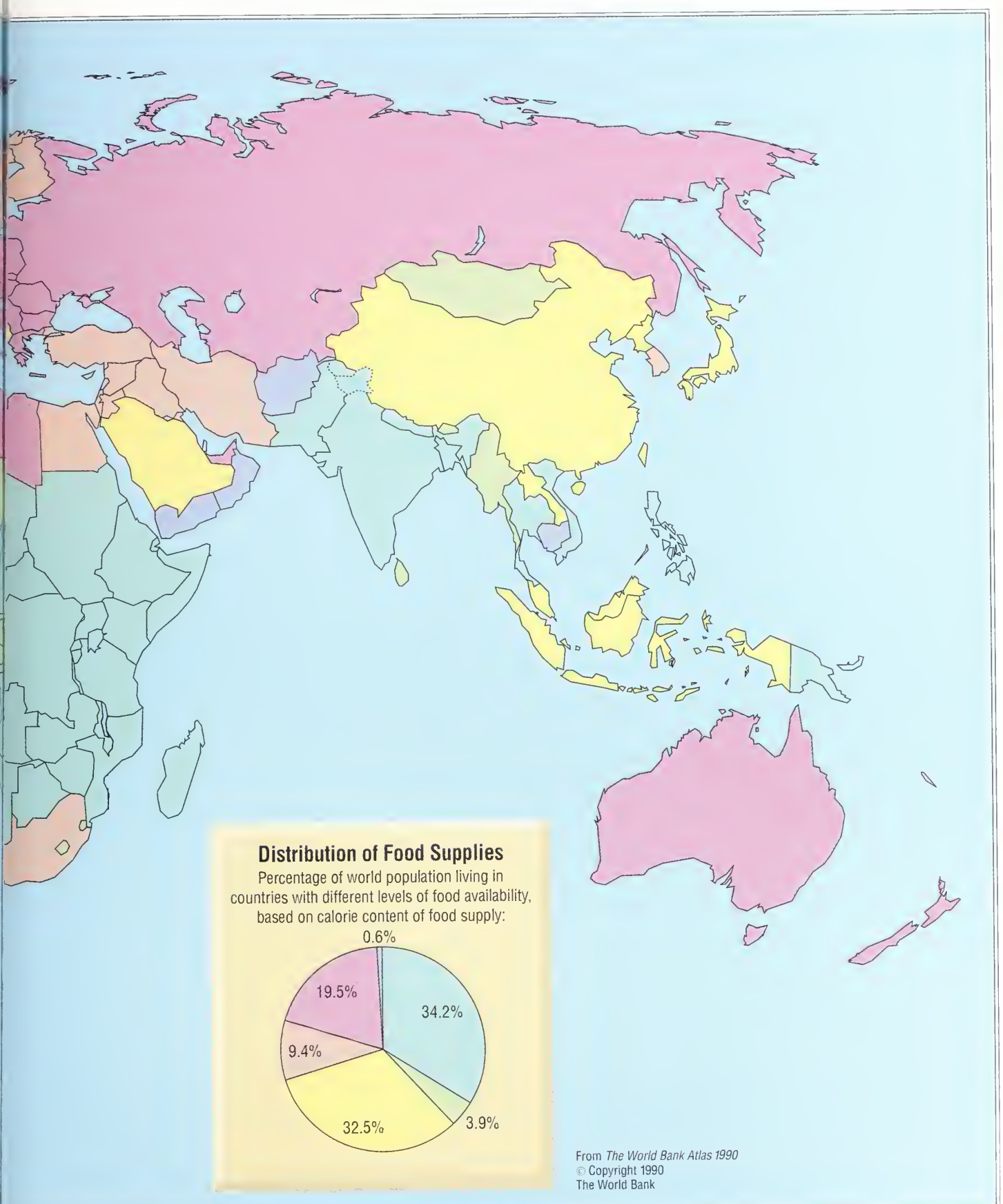
India 52%
Sudan 64%
Philippines 65%
Sierra Leone 68%

[1]1988 data, except Bahamas, Colombia, Ireland, Peru, Spain, and United Kingdom (1987); Honduras, Jordan, Portugal, Sierra Leone, and Zimbabwe (1986); Malaysia and Sudan (1983).
[2]Percentages cover spending on food and beverages (including alcoholic) for at-home consumption and do not include "dining out" expenditures. Data for Germany, Iran, Korea, Mexico, Peru, Sierra Leone, Spain, Switzerland, and Zimbabwe include spending on tobacco products.
Source: Agricultural economist Larry Traub, Economic Research Service, USDA, from United Nations statistics.

Daily Calorie Supply Per Capita

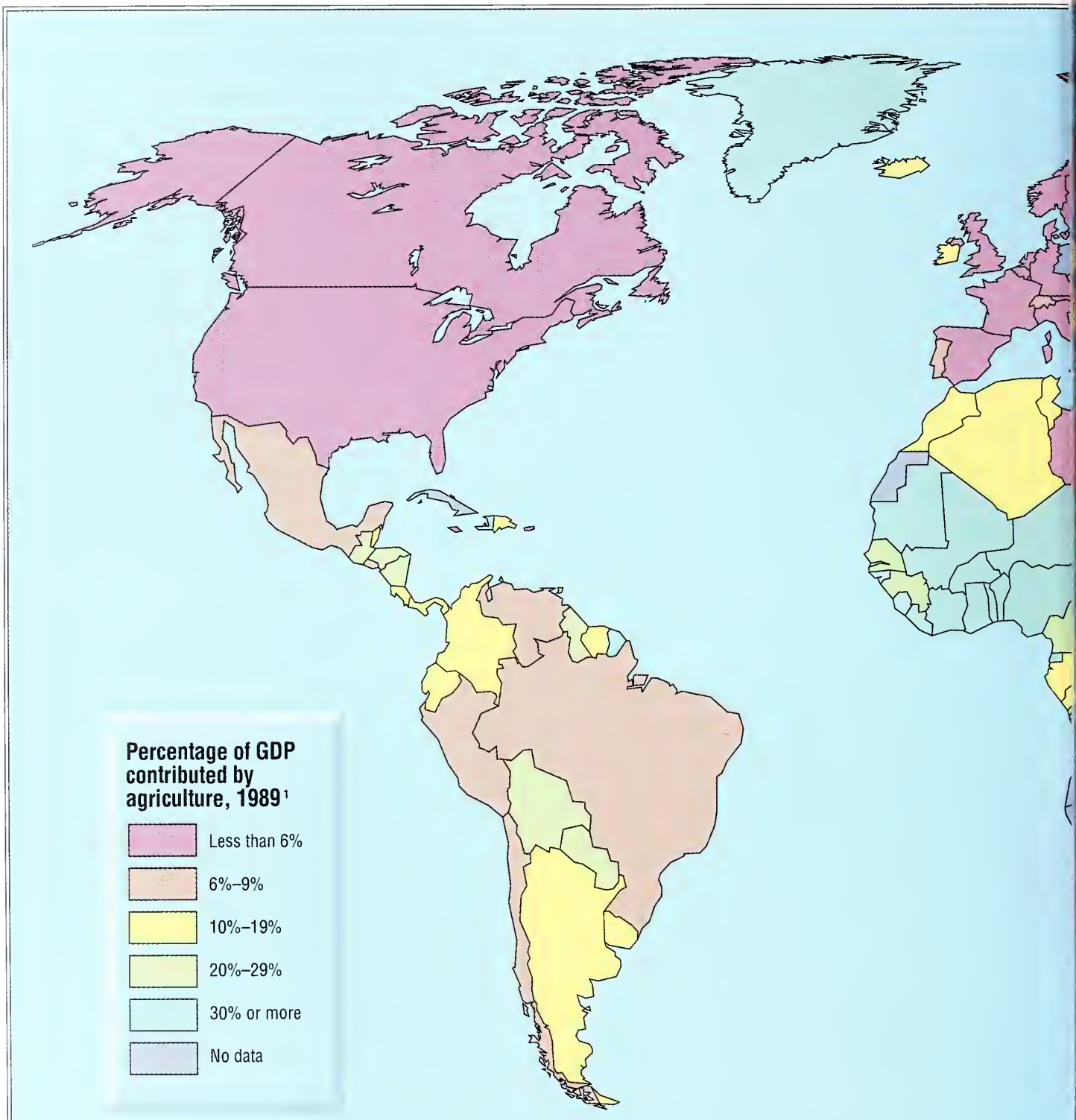


[1]Estimated calorie content of food produced and imported for domestic consumption, divided by a country's population and expressed as a daily amount.

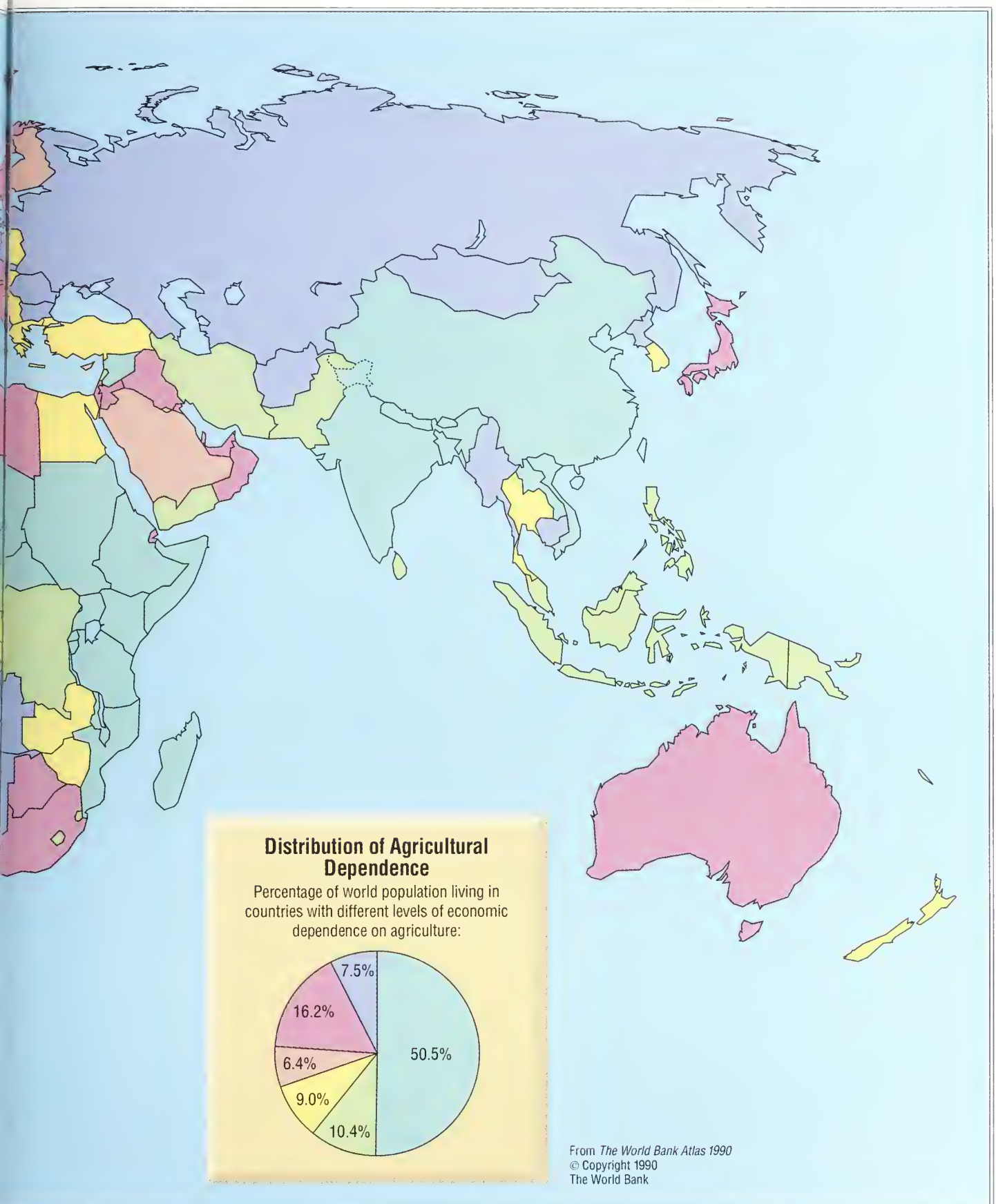


From *The World Bank Atlas 1990*

Economic Dependence on Agriculture



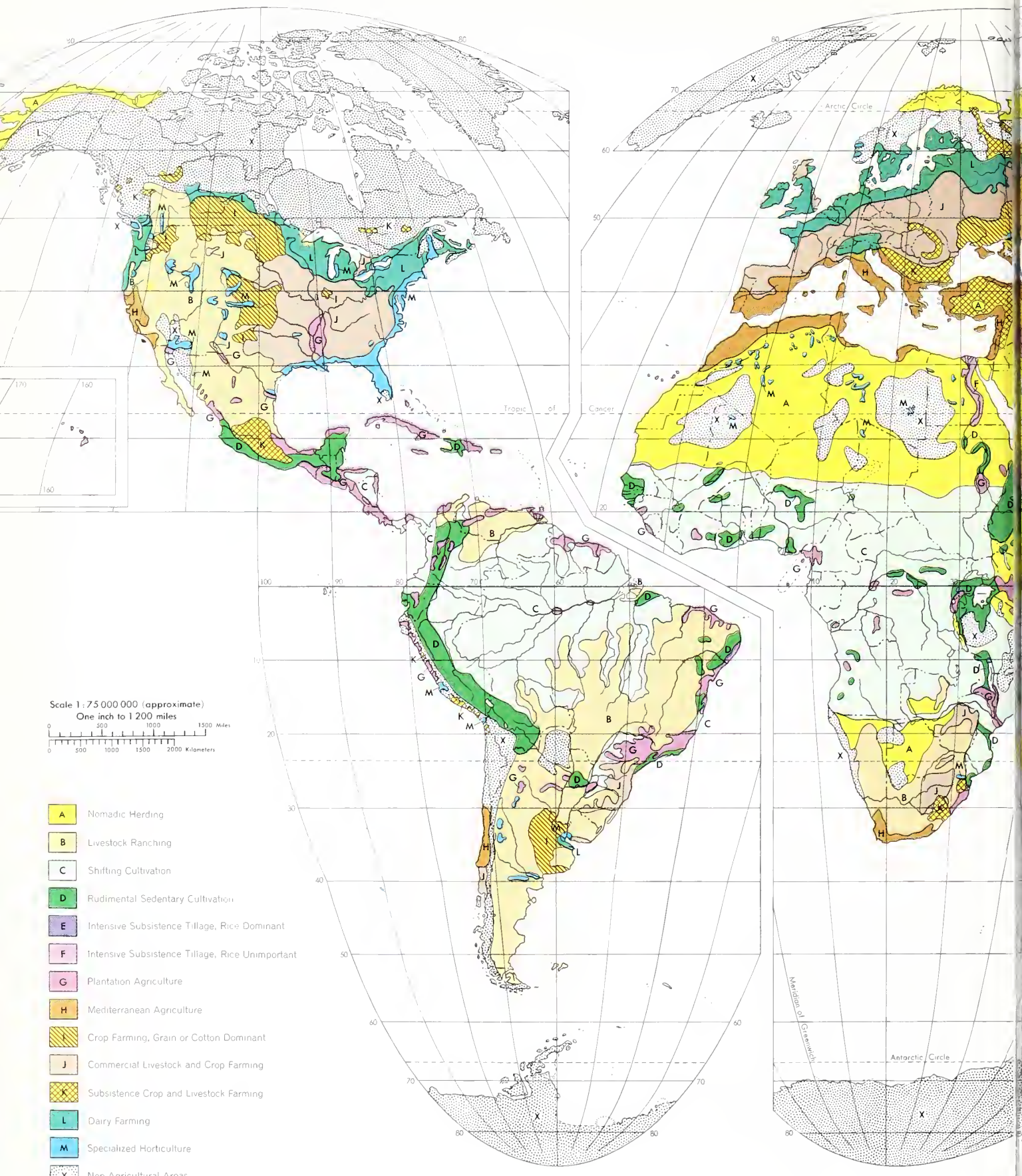
[1]Percentages show importance of agricultural sector in country's economy. For example, *30% or more* indicates that agriculture accounts for at least 30% of the country's total GDP or gross domestic product (value of all goods and services produced domestically).

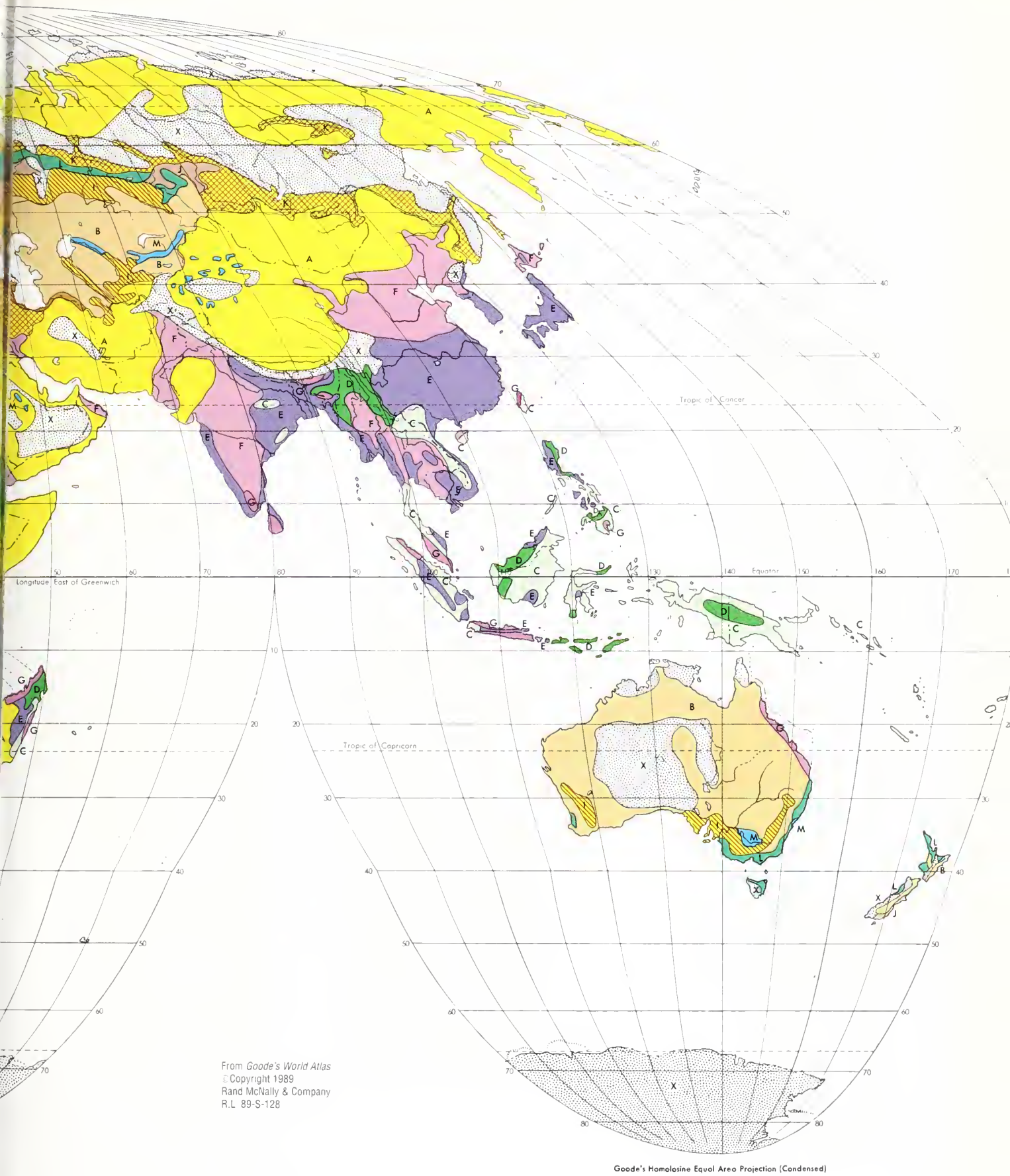


Distribution of Agricultural Dependence

Percentage of world population living in countries with different levels of economic dependence on agriculture:

Major Agricultural Regions Around the World





From *Goode's World Atlas*
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R.L 89-S-128

Goode's Homolosine Equal Area Projection (Condensed)

Key Harvest Periods for Corn and Soybeans

U.S. and Canada

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN	Greece	
JUL	Greece, Spain	Italy
AUG	Greece, Spain	Italy
SEP		Italy
OCT		
NOV		
DEC		

Mexico and Central America

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South America

	Corn	Soybeans
JAN		
FEB		
MAR	South	
APR	South	
MAY	South	
JUN	South	
JUL		
AUG	North	
SEP	North	
OCT	North	
NOV	North	
DEC		

Central and Southern Africa

	Corn	Soybeans
JAN		
FEB		
MAR		
APR	Southern	
MAY	Southern	
JUN	Southern	
JUL		
AUG		
SEP	Central	
OCT	Central	
NOV	Central	
DEC	Central	

User Guide

Region

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified

General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		Yugoslavia
AUG		Yugoslavia
SEP		
OCT		
NOV		
DEC		

USSR

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP	India	China
OCT	India	China, India
NOV	India	
DEC	India	

North Africa and Middle East

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL	Morocco	
AUG	Morocco, Turkey	
SEP	Morocco, Turkey	
OCT	Morocco	
NOV		
DEC		

Southeast Asia

	Corn	Soybeans
JAN	Philippines	
FEB	Philippines	
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC	Philippines	

Australia and New Zealand

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Wheat

U.S. and Canada

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY	Greece, Spain, Italy	
JUN	Greece, Spain, Italy	Italy
JUL		Italy, France
AUG		Italy, France Ireland
SEP	Ireland	Italy, Ireland
OCT		Ireland
NOV		
DEC		

Mexico and Central America

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

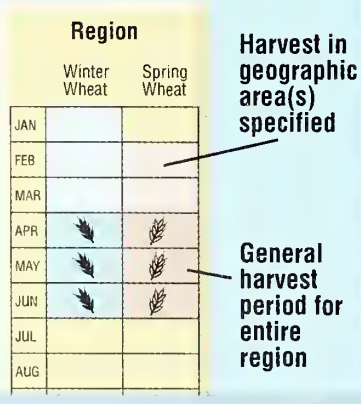
South America

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Central and Southern Africa

	Winter Wheat	Spring Wheat
JAN	South	
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		South
NOV		South
DEC	South	

User Guide



Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		Hungary
AUG		Poland
SEP		Poland
OCT		
NOV		
DEC		

USSR

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR	India	
APR	India	
MAY	India, China	
JUN	India, China	
JUL	India	China
AUG		China
SEP		
OCT		
NOV		
DEC		

North Africa and Middle East

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Southeast Asia

	Winter Wheat	Spring Wheat
JAN	Burma	
FEB	Burma	
MAR	Burma	
APR	Burma	
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Australia and New Zealand

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Rice and Cotton

U.S. and Canada

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		Greece, Spain
OCT		Greece, Spain
NOV		Greece, Spain
DEC		

Mexico and Central America

	Rice	Cotton
JAN		Central America
FEB		Central America
MAR		Central America
APR		
MAY		
JUN		
JUL		
AUG		Mexico
SEP		Mexico
OCT		Mexico
NOV		
DEC		

South America

	Rice	Cotton
JAN		Colombia, NE Brazil
FEB		Colombia, S. Brazil, Argen.
MAR	South	Colombia, S. Brazil, Argen.
APR	South	S. Brazil, Argentina
MAY	South	S. Brazil, Argentina
JUN	South	Argentina
JUL		
AUG		NE Brazil
SEP	North	NE Brazil
OCT	North	NE Brazil
NOV	North	NE Brazil
DEC	North	Colombia, NE Brazil

Central and Southern Africa

	Rice	Cotton
JAN		West Africa, Sudan, Kenya
FEB		West Africa, Sudan, Kenya
MAR		West Africa, Sudan, Kenya
APR		Southern Africa, Kenya
MAY		Southern Africa, Tanzania
JUN		Southern Africa, Tanzania
JUL		Southern Africa, Kenya, Tanzania
AUG		Southern Africa, Kenya
SEP	Central	Kenya
OCT	Central	West Africa, Kenya
NOV	Central	West Africa, Sudan, Kenya
DEC	Central	West Africa, Sudan, Kenya

User Guide

Region

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified

General harvest period for entire region

Source. Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

USSR

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Rice	Cotton
JAN	India	India, Pakistan
FEB		India, Pakistan
MAR	India	India
APR	India	
MAY	India	
JUN		
JUL	China, Bangladesh	
AUG	China, Bangladesh	
SEP	China, India	China
OCT	China, India	China, India
NOV	China, India	China, India Pakistan
DEC	India	India, Pakistan

North Africa and Middle East

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL	Morocco	
AUG	Morocco	
SEP		Egypt, Syria, Turkey
OCT		Egypt, Syria, Turkey
NOV		Syria, Turkey
DEC		Syria, Turkey

Southeast Asia

	Rice[1]	Cotton
JAN	North	
FEB	North	
MAR	South	
APR	South	
MAY	South	
JUN	South	
JUL		
AUG		
SEP	North	
OCT	North	
NOV	North	
DEC	North	

[1]Minor harvests all year.

Australia and New Zealand

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Sugar

U.S. and Canada

	Cane Sugar	Beet Sugar
JAN	U.S.	
FEB	U.S.	
MAR	U.S.	
APR	U.S.	
MAY	U.S.	
JUN		
JUL		California
AUG		California
SEP		
OCT	U.S.	Canada
NOV	U.S.	Canada
DEC	U.S.	Canada

Western Europe

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR	Spain	
MAY	Spain	
JUN	Spain	
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Mexico and Central America

	Cane Sugar	Beet Sugar
JAN	Costa Rica, Mexico, Cuba, Guatemala	
FEB	Costa Rica, Mexico, Cuba, Guatemala	
MAR	Costa Rica, Mexico, Cuba, Guatemala	
APR	Mexico, Cuba, Guatemala	
MAY	Mexico, Cuba	
JUN	Mexico, Cuba	
JUL	Mexico	
AUG	Mexico	
SEP		
OCT	Costa Rica	
NOV	Costa Rica, Mexico	
DEC	Costa Rica, Mexico, Guatemala	

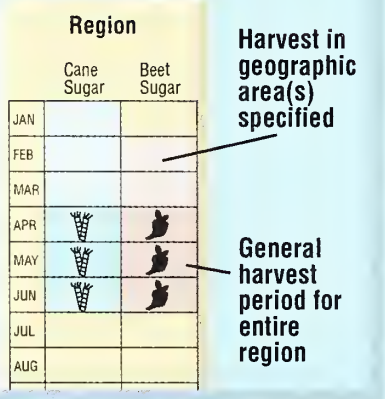
South America

	Cane Sugar	Beet Sugar
JAN	Venezuela, Colombia	
FEB	Venezuela, Colombia	
MAR	Venezuela, Colombia	Chile
APR	Venezuela, Colombia	Chile
MAY	Venezuela, Colombia	Chile
JUN	Venezuela, Colombia, So. Brazil	Chile
JUL	Venezuela, Colombia, So. Brazil	Chile
AUG	Venezuela, Brazil	Chile
SEP	Venezuela, Brazil, Colombia	Chile
OCT	Venezuela, NE Brazil, Colombia	
NOV	Venezuela, NE Brazil, Colombia	
DEC	Venezuela, NE Brazil, Colombia	

Central and Southern Africa

	Cane Sugar	Beet Sugar
JAN	Egypt, Ethiopia	
FEB	Egypt, Ethiopia	
MAR	Egypt, Ethiopia	
APR	Egypt, Ethiopia	
MAY	Southern Africa, Egypt, Ethiopia	
JUN	Southern Africa, Egypt, Ethiopia	
JUL	Southern Africa, Ethiopia	
AUG	Southern Africa, Ethiopia	
SEP	Southern Africa, Ethiopia	
OCT	Southern Africa, Ethiopia	
NOV	Southern Africa, Ethiopia	
DEC	Southern Africa, Egypt, Ethiopia	

User Guide



Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

USSR

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Cane Sugar	Beet Sugar
JAN	China, India, Bangladesh, Japan	China, Japan
FEB	China, India, Bangladesh, Japan	Japan
MAR	China, India, Bangladesh	
APR	China, Bangladesh	
MAY	China	
JUN	China	
JUL	China	
AUG	China	
SEP	China	China
OCT	China, Japan, Bangladesh	China, Japan
NOV	China, India, Bang., Japan	China, Japan
DEC	China, India, Bang., Japan	China, Japan

North Africa and Middle East

	Cane Sugar	Beet Sugar
JAN	Turkey	Turkey
FEB	Turkey	Turkey
MAR		
APR		
MAY		
JUN		North Africa
JUL		North Africa
AUG	Turkey	N. Africa, Turkey
SEP	Turkey	N. Africa, Turkey
OCT	Turkey	N. Africa, Turkey
NOV	Turkey	N. Africa, Turkey
DEC	Turkey	Turkey

Southeast Asia

	Cane Sugar	Beet Sugar
JAN	Thailand, Philippines	
FEB	Thailand, Philippines	
MAR	Thailand, Philippines	
APR	Thailand, Indo., Philippines	
MAY	Thailand, Indo., Philippines	
JUN	Indonesia, Philippines	
JUL	Indonesia, Philippines	
AUG	Indonesia, Philippines	
SEP	Indonesia Philippines	
OCT	Indonesia, Philippines	
NOV	Thailand, Indo., Philippines	
DEC	Thailand, Indo., Philippines	

Australia and New Zealand

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Coffee and Citrus

U.S. and Canada

	Coffee	Citrus[1]
JAN		Calif., Ariz., Texas, Fl.
FEB		Calif., Ariz., Texas, Fl.
MAR		Calif., Ariz., Texas, Fl.
APR		Calif., Ariz., Florida
MAY		California, Florida
JUN		California, Florida
JUL		California
AUG		California
SEP		California
OCT		California
NOV		Calif., Ariz., Texas
DEC		Calif., Ariz., Texas, Fl.

[1]Harvest periods shown are for oranges.

Western Europe

	Coffee	Citrus
JAN		Mediterranean
FEB		Mediterranean
MAR		Mediterranean
APR		Mediterranean
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		Mediterranean

Mexico and Central America

	Coffee	Citrus
JAN		Mexico
FEB		Mexico
MAR		Mexico
APR		Mexico
MAY		Mexico
JUN		
JUL		
AUG	Central America	
SEP	Central America	Mexico
OCT	Central America	Mexico
NOV		Mexico
DEC		Mexico

South America

	Coffee	Citrus[1]
JAN	Venezuela	
FEB		
MAR	Colombia	
APR	Colombia, Brazil	Brazil
MAY	Colombia, Brazil	Brazil
JUN	Brazil	Brazil
JUL	Brazil	Brazil
AUG	Brazil	Brazil
SEP	Brazil	Brazil
OCT	Venezuela	Brazil
NOV	Venezuela	Brazil
DEC	Venezuela	Brazil

[1]Harvest periods shown are for oranges.

Central and Southern Africa

	Coffee	Citrus
JAN	Cote d'Ivoire, Ethiopia, Tanz.	
FEB	Cote d'Ivoire, Tanzania	
MAR	Cote d'Ivoire, Tanzania	
APR	Cote d'Ivoire	
MAY		
JUN		
JUL		
AUG		
SEP		
OCT	Cote d'Ivoire	
NOV	Cote d'Ivoire, Ethiopia, Tanz.	
DEC	Cote d'Ivoire, Ethiopia, Tanz.	

User Guide

Region

	Coffee	Citrus
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified

General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

North Africa and Middle East

	Coffee	Citrus
JAN		Northwest Africa
FEB		Northwest Africa
MAR		Northwest Africa
APR		Northwest Africa
MAY		Northwest Africa
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		Northwest Africa
DEC		Northwest Africa

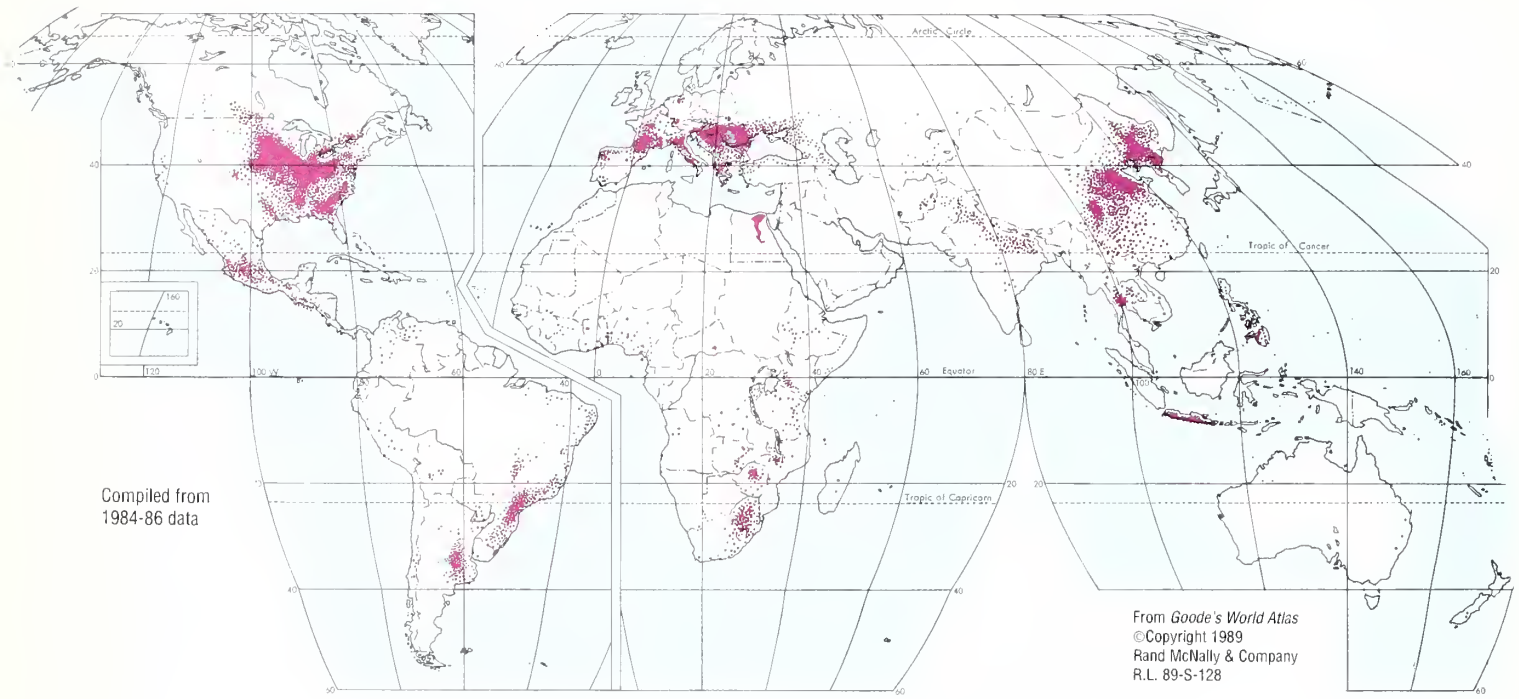
Southeast Asia

	Coffee	Citrus
JAN	Philippines	
FEB	Philippines	
MAR	Philippines	
APR	Philippines	
MAY	Indonesia	
JUN	Indonesia	
JUL	Indonesia	
AUG	Indonesia	
SEP	Indonesia	
OCT	Indonesia	
NOV	Philippines, Indonesia	
DEC	Philippines, Indonesia	

South and East Asia

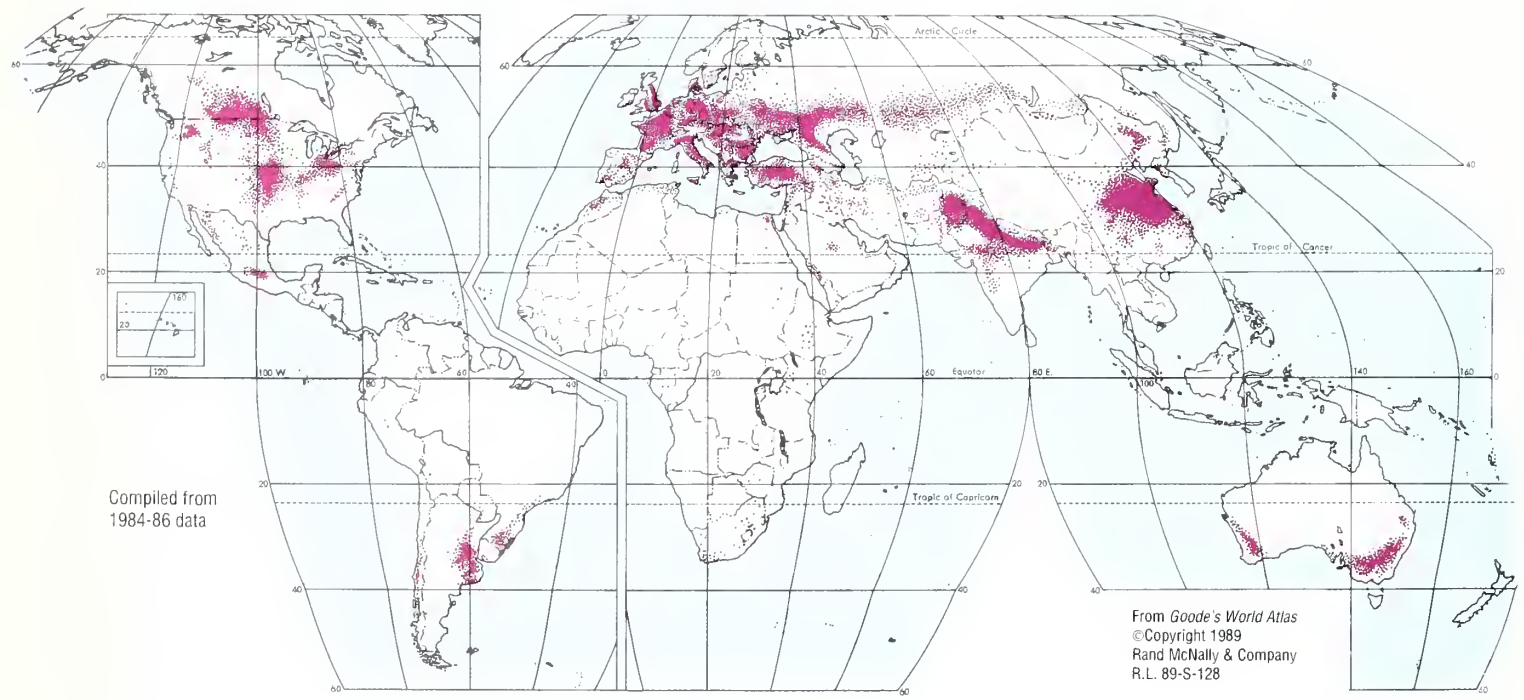
	Coffee	Citrus
JAN	India	
FEB	India	
MAR		
APR		
MAY		
JUN		South Asia
JUL		South Asia
AUG		South Asia
SEP		
OCT	India	
NOV	India	
DEC	India	

Where Corn Is Produced



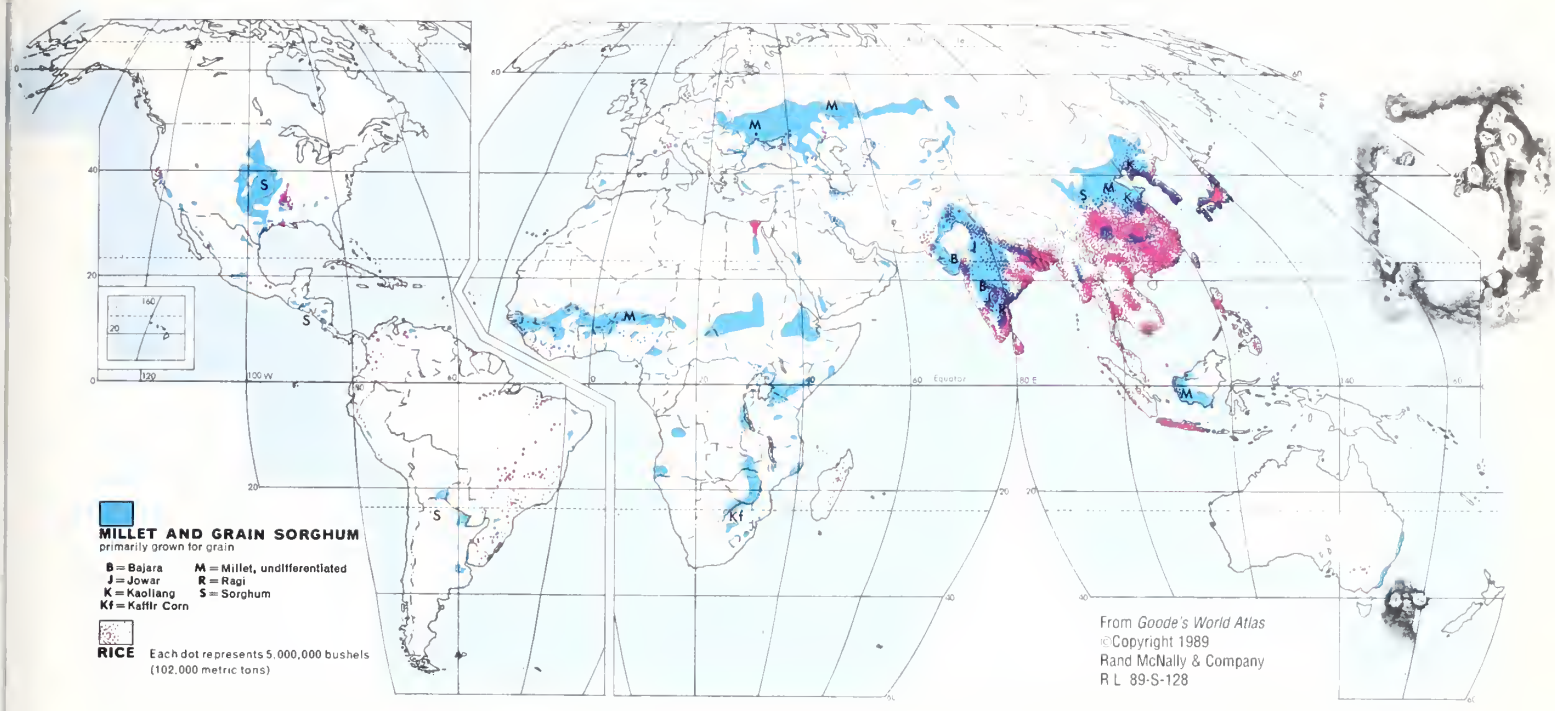
CORN Each dot represents 3,000,000 bushels (76,200 metric tons)

Where Wheat Is Produced



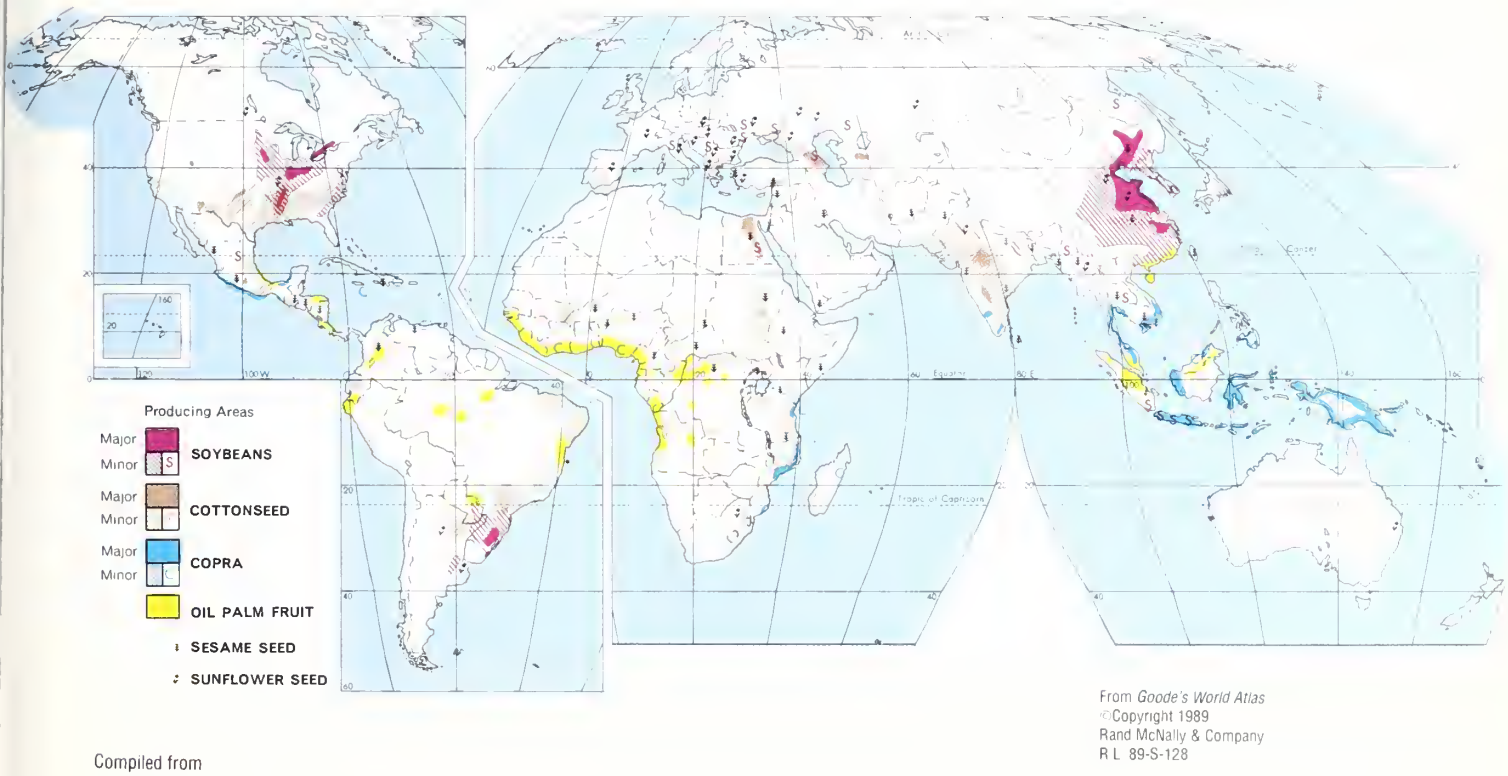
WHEAT Each dot represents 2,000,000 bushels (54,400 metric tons)

Where Rice, Millet, and Grain Sorghum Are Produced



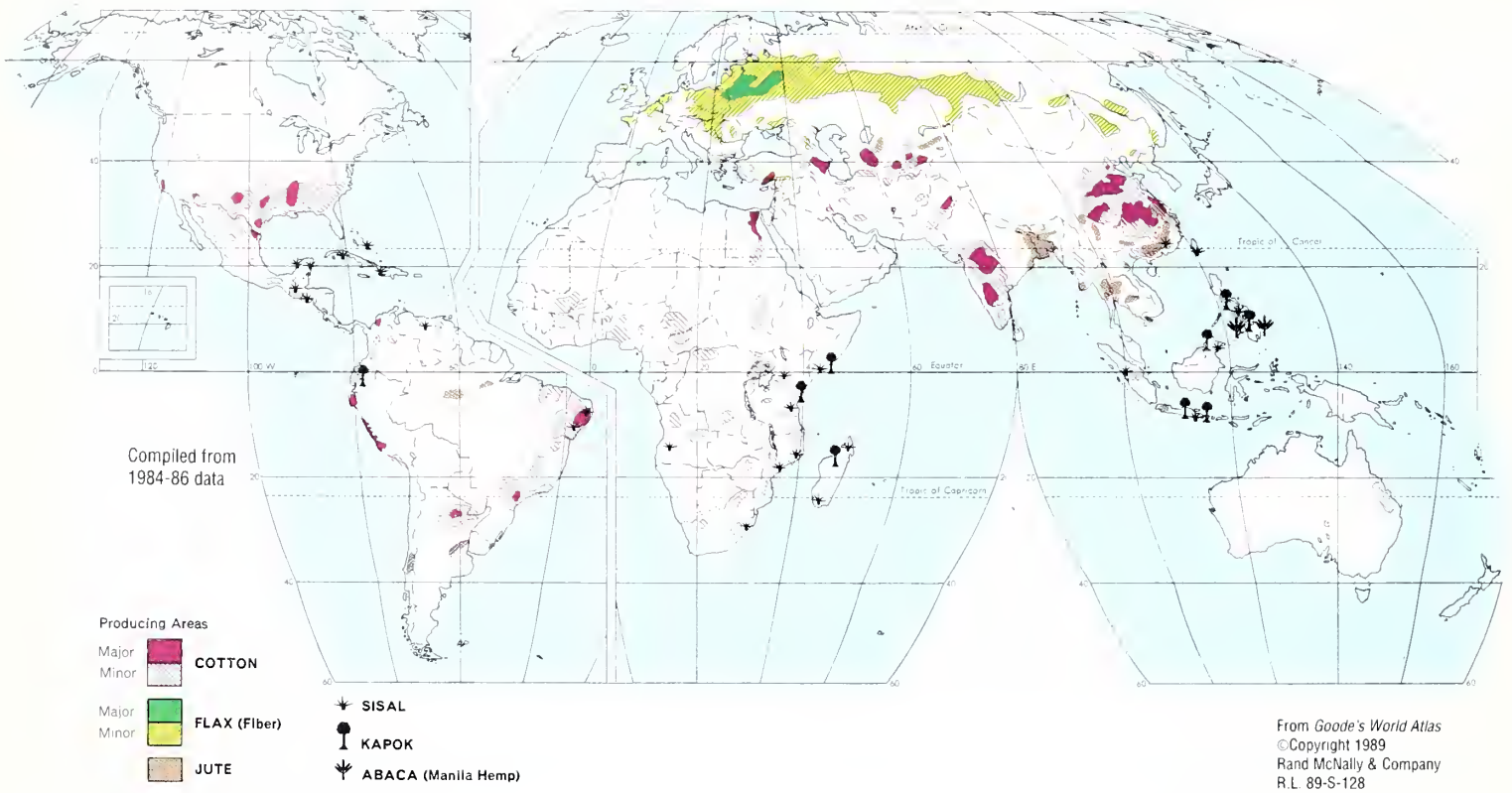
Compiled from
1984-86 data

Where Soybeans and Other Oilseeds Are Produced

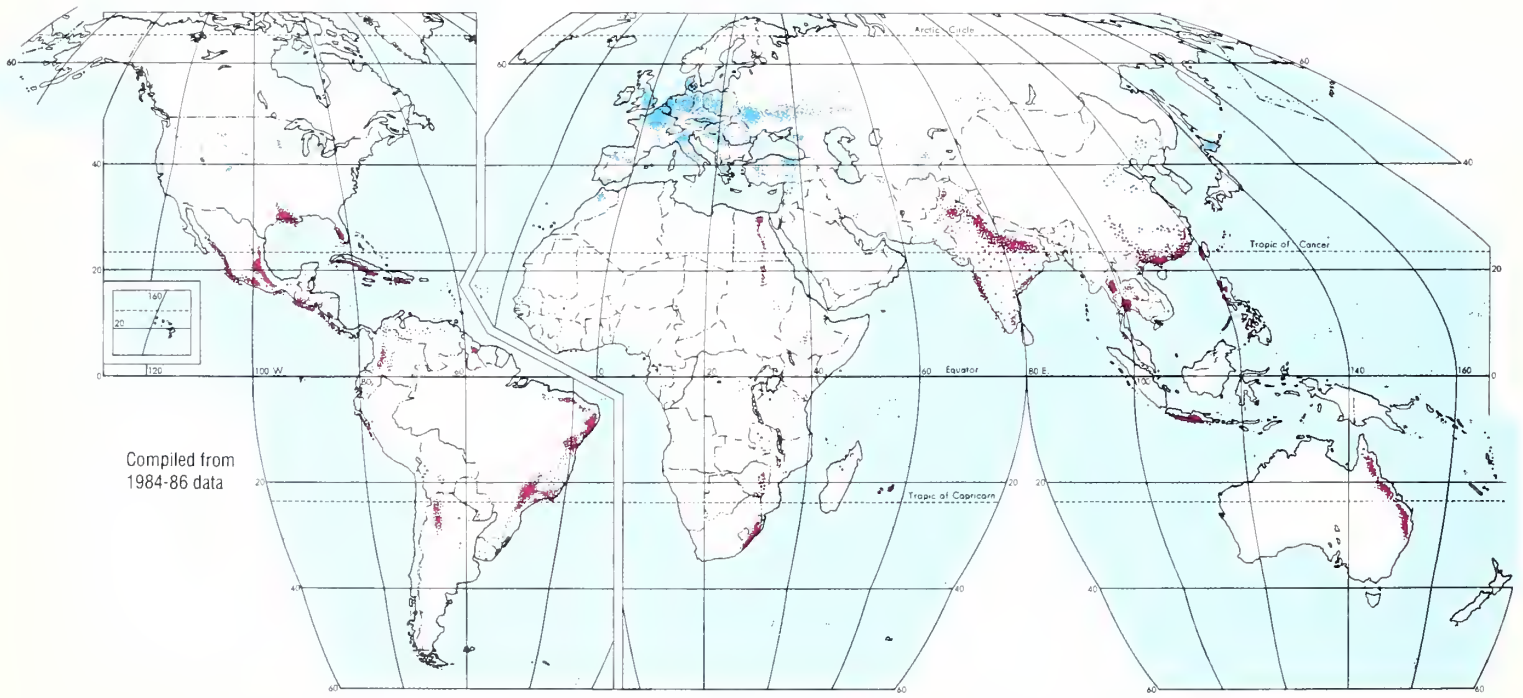


Compiled from
1984-86 data

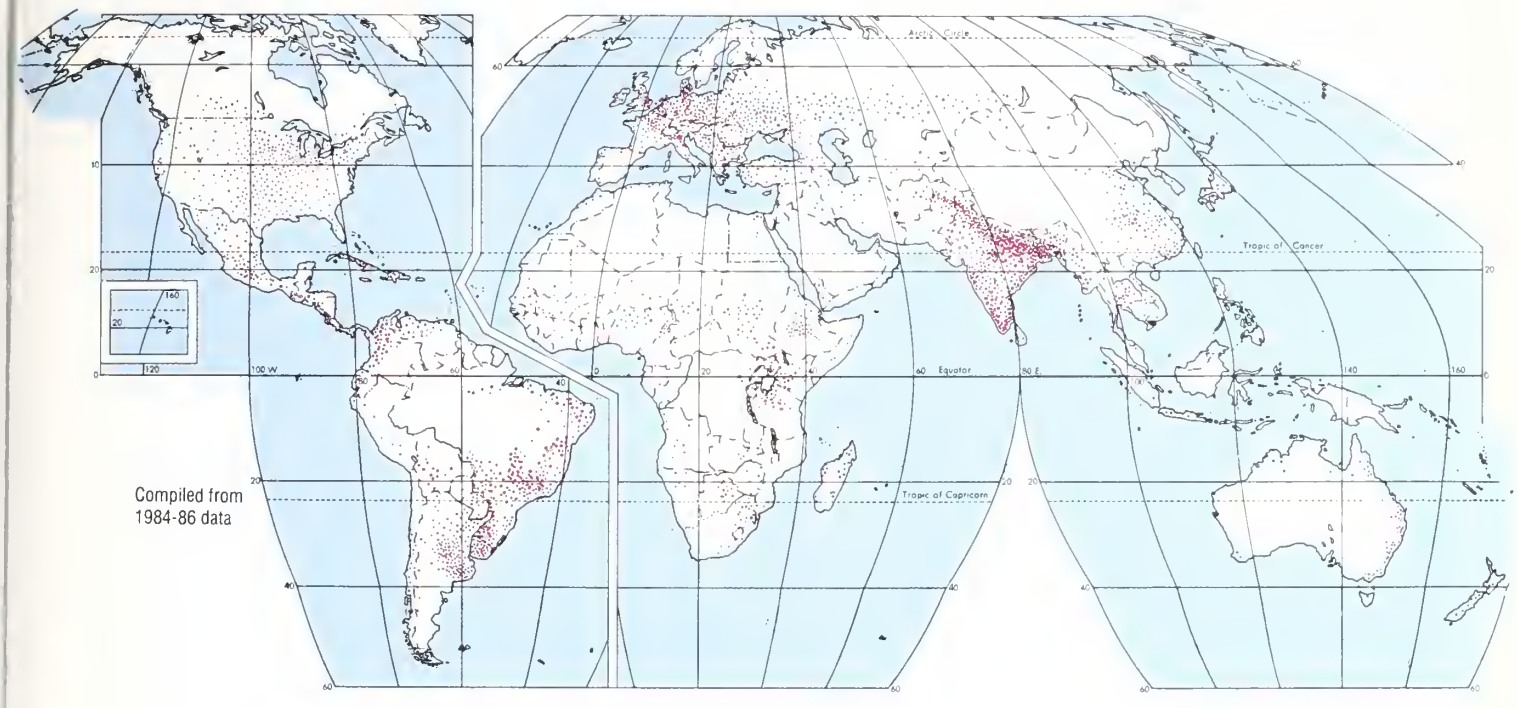
Where Cotton and Other Natural Fibers Are Produced



Where Sugar Is Produced

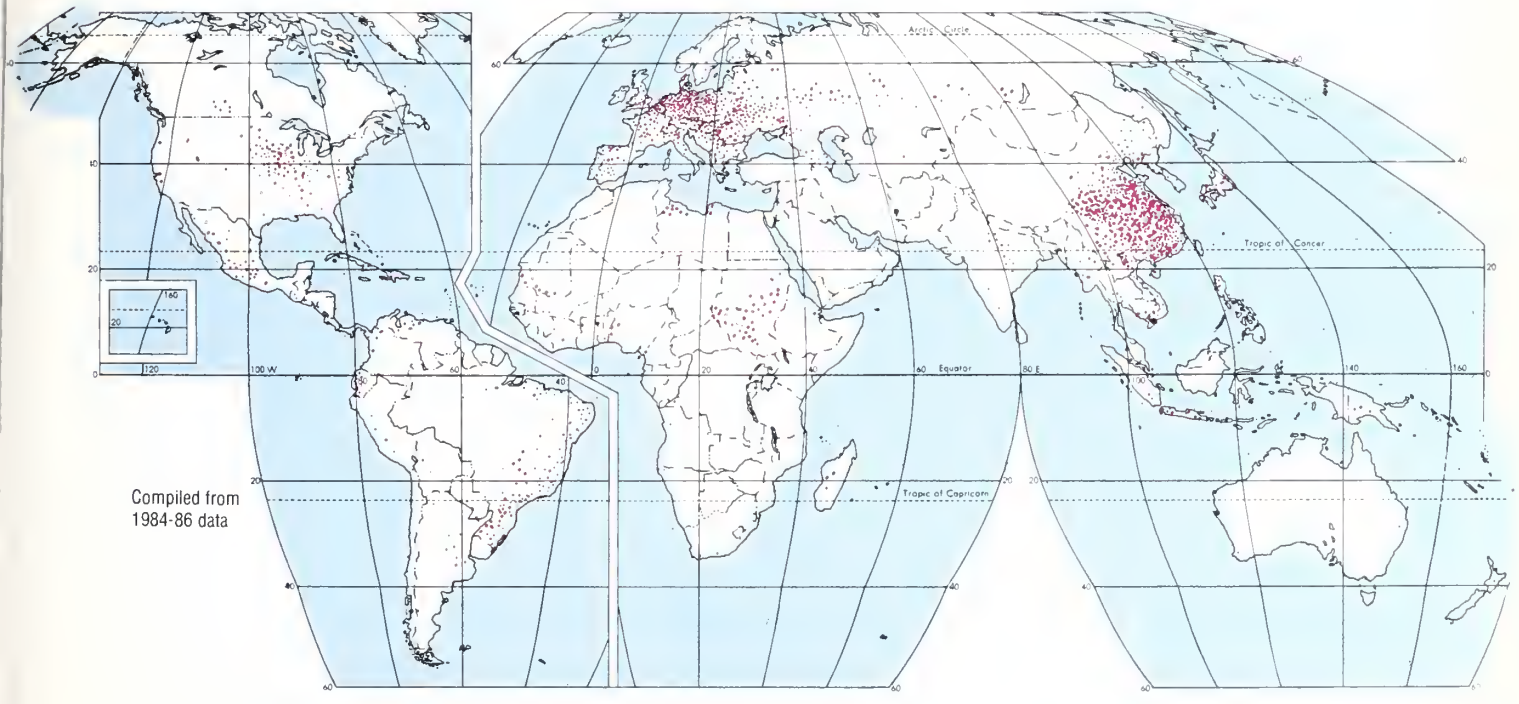


Where Cattle Are Produced



CATTLE Each dot represents 500,000 head

Where Hogs and Pigs Are Produced



SWINE Each dot represents 500,000 head

Coarse Grains Production and Trade

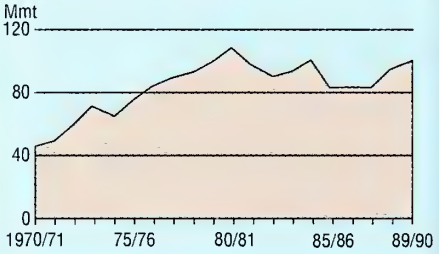
World Production Since 1970

Million metric tons (mmt)

Top Producing Nations, 1989/90

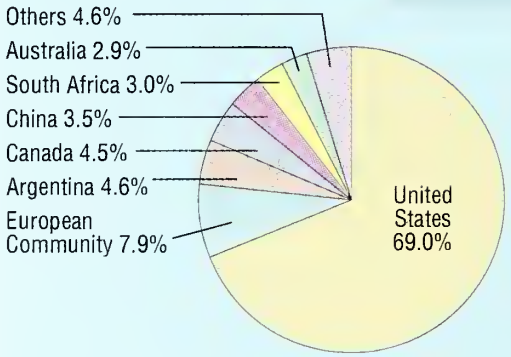
	Production	Share of world total
	mmt	percent
United States	221.4	27.7
USSR	104.8	13.1
China	94.6	11.8
European Comm.	82.1	10.3
Eastern Europe	68.1	8.5
Canada	23.5	2.9
South Africa	10.0	1.3
Argentina	8.3	1.0
Australia	6.9	0.9
Others	180.2	22.5
World total	799.9	100.0

World Trade Since 1970



Leading Exporters

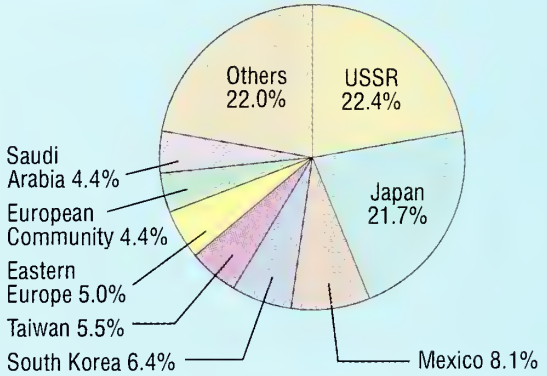
Share of total world exports, 1989/90



Total = 100.3 million metric tons

Leading Importers

Share of total world imports, 1989/90



Total = 100.3 million metric tons

Coarse grains include corn, sorghum, barley, oats, and rye. Data are reported on an October/September basis since 1976/77. Intra-EC trade is excluded. Data for Eastern Europe include the former East Germany.
Source: *World Grain Situation and Outlook*, January 1991, Foreign Agricultural Service, USDA.

Wheat Production and Trade

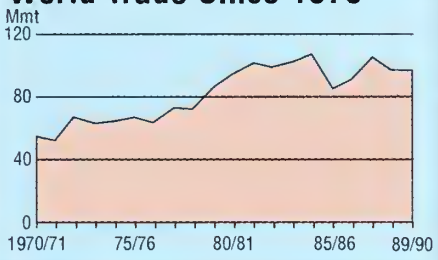
World Production Since 1970

Million metric tons (mmt)

Top Producing Nations, 1989/90

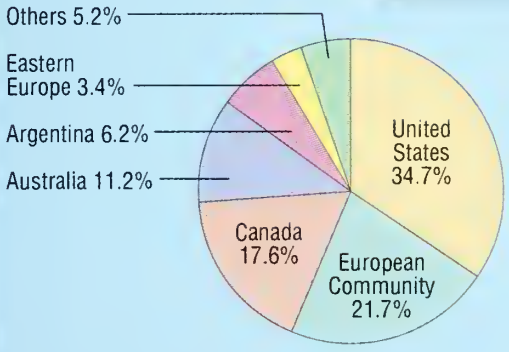
	Production	Share of world total
	mmt	percent
USSR	92.3	17.2
China	90.8	16.9
European Comm.	78.3	14.6
United States	55.4	10.3
India	54.0	10.1
Eastern Europe	44.3	8.3
Canada	24.6	4.6
Australia	14.1	2.6
Argentina	10.2	1.9
Others	72.7	13.5
World total	536.7	100.0

World Trade Since 1970



Leading Exporters

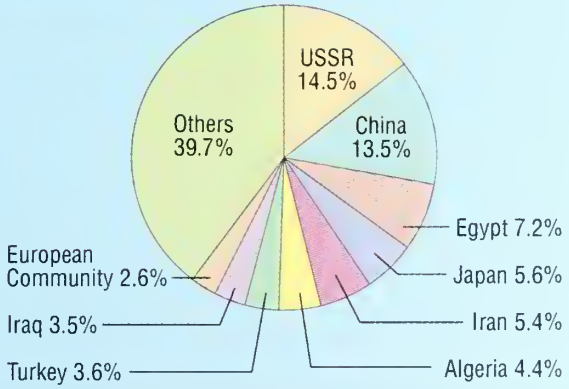
Share of total world exports, 1989/90



Total = 96.6 million metric tons

Leading Importers

Share of total world imports, 1989/90



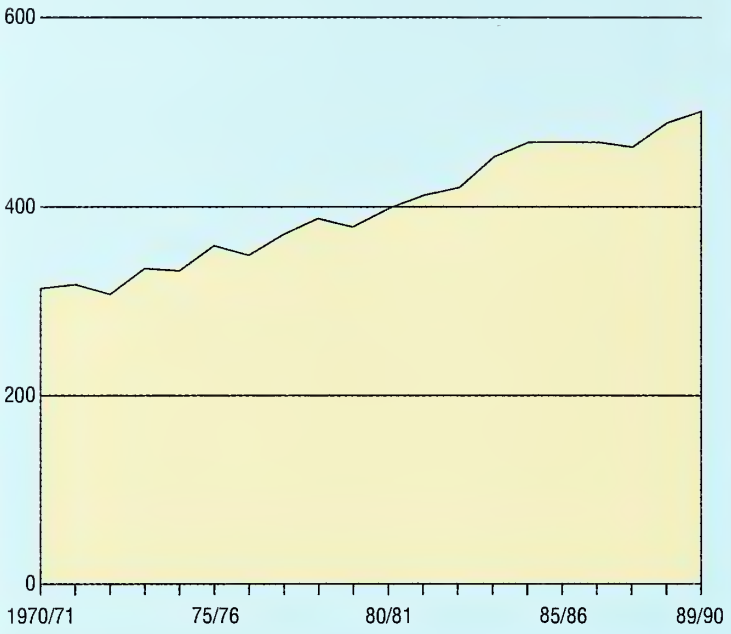
Total = 96.6 million metric tons

Exports include the grain equivalent of wheat flour. Data are reported on a July/June basis. Intra-EC trade is excluded. Data for Eastern Europe include the former East Germany.
Source: *World Grain Situation and Outlook*, January 1991, Foreign Agricultural Service, USDA.

Rice Production and Trade

World Production Since 1970

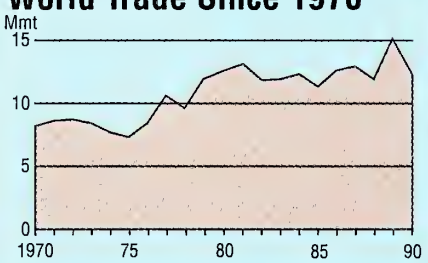
Million metric tons (mmt)



Top Producing Nations, 1989/90

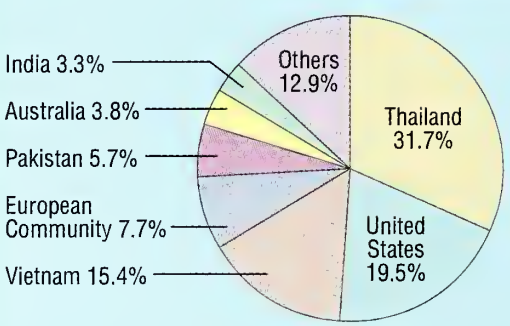
	Production	Share of world total
	mmt	percent
China	180.1	35.8
India	105.0	20.9
Indonesia	44.7	8.9
Bangladesh	27.0	5.4
Thailand	20.8	4.1
Burma	13.5	2.7
Japan	12.9	2.6
South Korea	8.2	1.6
Brazil	7.4	1.5
Others	83.1	16.5
World total	502.7	100.0

World Trade Since 1970



Leading Exporters

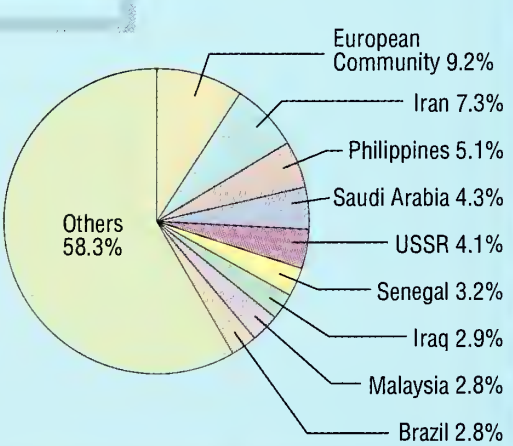
Share of total world exports, 1990



Total = 12.3 million metric tons

Leading Importers

Share of total world imports, 1990



Total = 12.3 million metric tons

Production data are for rough rice and are reported on a marketing year basis (aggregate of different local marketing years).
Trade data are for milled rice (intra-EC trade included) and are reported on a calendar year basis.
Source. *World Grain Situation and Outlook*, January 1991, Foreign Agricultural Service, USDA.

Oilseeds Production and Trade

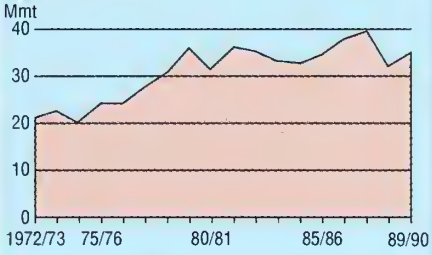
World Production Since 1972

Million metric tons (mmt)

Top Producing Nations, 1989/90

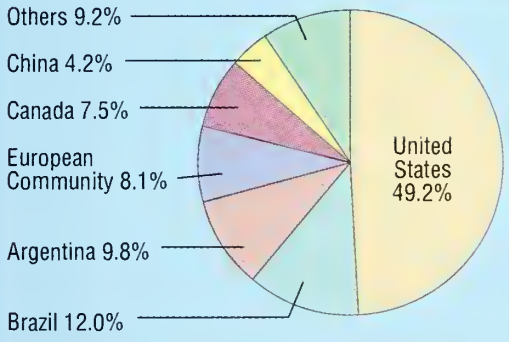
	Production	Share of world total
	mmt	percent
United States	59.2	27.6
China	28.4	13.2
Brazil	21.4	10.0
India	18.0	8.4
Argentina	15.9	7.4
USSR	14.0	6.5
European Comm.	11.0	5.1
Eastern Europe	6.0	2.8
Canada	4.9	2.2
Others	35.1	16.8
World total	213.9	100.0

World Trade Since 1972



Leading Exporters

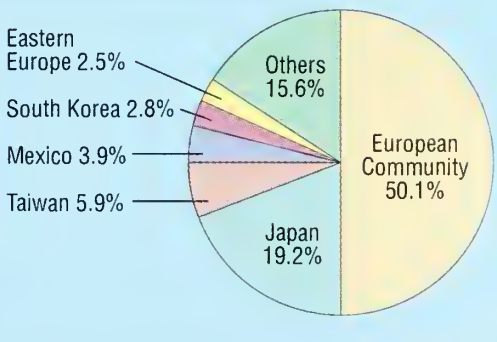
Share of total world exports, 1989/90



Total = 35.7 million metric tons

Leading Importers

Share of total world imports, 1989/90



Total = 35.5 million metric tons

Oilseed data include soybeans, cottonseed, peanut, sunflowerseed, rapeseed, flaxseed, copra, and palm kernel. Data are reported on a marketing year basis (aggregate of different local marketing years). Trade data include intra-EC trade. No adjustment is made for transit times, reporting discrepancies, and other factors that result in differences between world export and import totals.

Source: Oilseeds and Products Division, Foreign Agricultural Service, USDA.

Cotton Production and Trade

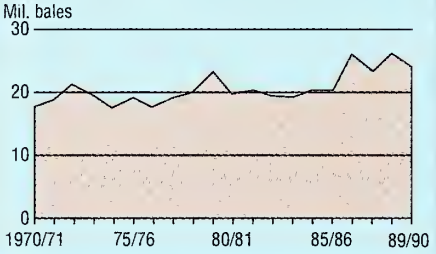
World Production Since 1970

Million bales

Top Producing Nations, 1989/90

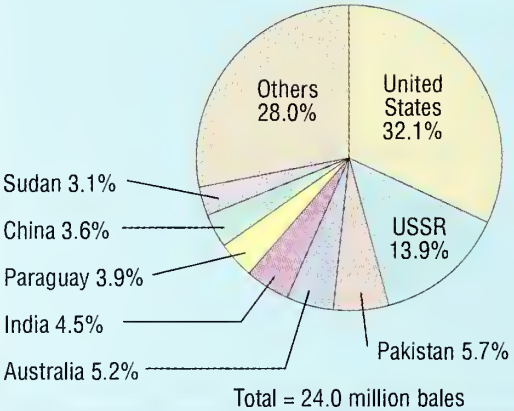
	Production	Share of world total
	mil. bales	percent
China	17.40	21.7
USSR	12.34	15.4
United States	12.20	15.2
India	10.43	13.0
Pakistan	6.68	8.4
Brazil	3.03	3.8
Turkey	2.84	3.5
European Comm.	1.46	1.8
Australia	1.40	1.8
Egypt	1.32	1.7
Argentina	1.27	1.6
Others	9.63	12.1
World total	80.00	100.0

World Trade Since 1970



Leading Exporters

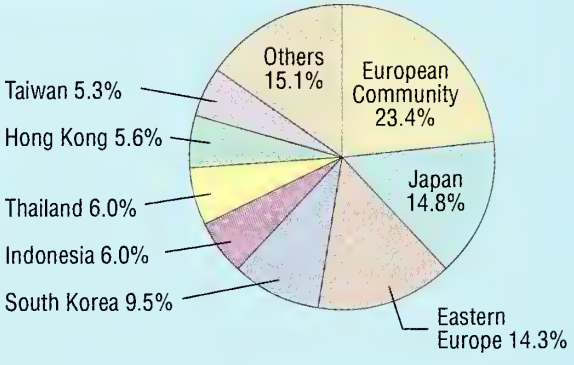
Share of total world exports, 1989/90



Total = 24.0 million bales

Leading Importers

Share of total world imports, 1989/90

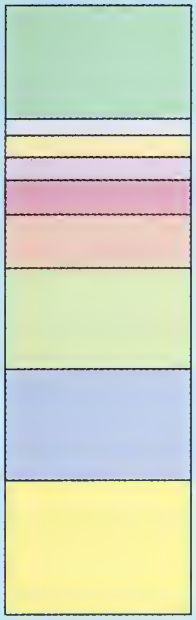


Total = 21.4 million bales

Data are reported on an August/July basis. Trade data include intra-EC trade. No adjustment is made for transit times, reporting discrepancies, and other factors that result in differences between world export and import totals.
Source: *World Cotton Situation*, February 1991, Foreign Agricultural Service, USDA.

Beef and Pork Production and Trade

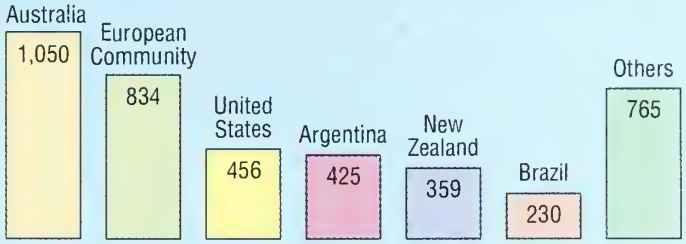
Leading Beef and Veal Producers, 1990



Total = 47.7 million metric tons

Leading Beef and Veal Exporters, 1990

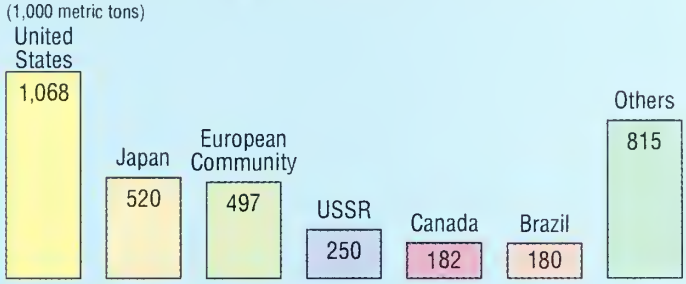
(1,000 metric tons)



Total = 4,119 thousand metric tons

Leading Beef and Veal Importers, 1990

(1,000 metric tons)



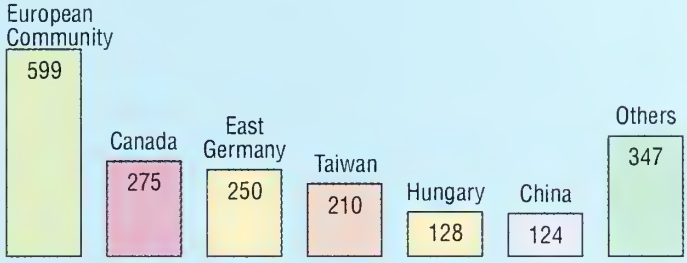
Total = 3,512 thousand metric tons

Leading Pork Producers, 1990

Total = 65.0 million metric tons

Leading Pork Exporters, 1990

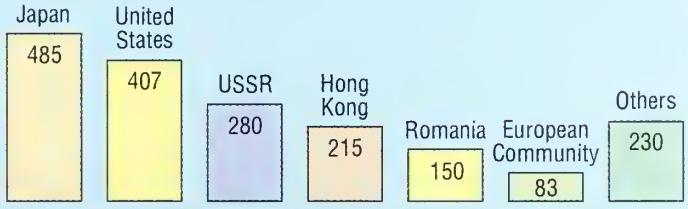
(1,000 metric tons)



Total = 1,933 thousand metric tons

Leading Pork Importers, 1990

(1,000 metric tons)



Total = 1,850 thousand metric tons

All data are preliminary. Trade totals exclude intra-EC trade. No adjustment is made for transit time, reporting discrepancies, and other factors that result in differences between world export and import totals. East Germany refers to former German Democratic Republic.
Source: Dairy, Livestock, and Poultry Division, Foreign Agricultural Service, USDA.

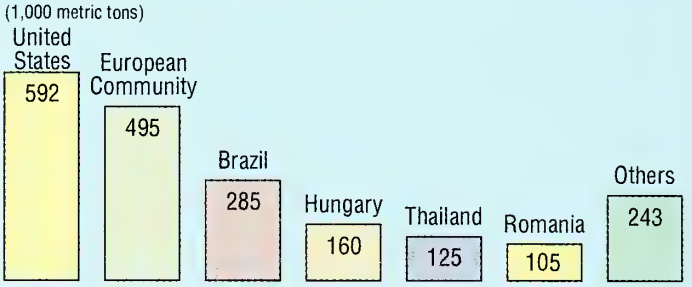
Poultry and Dairy Production and Trade

Leading Nations in Commercial Poultry Meat Production, 1990

Total = 35.7 million metric tons

Leading Poultry Meat Exporters, 1990

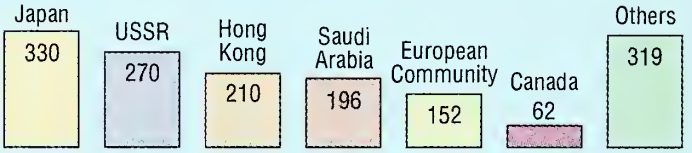
(1,000 metric tons)



Total = 2,005 thousand metric tons

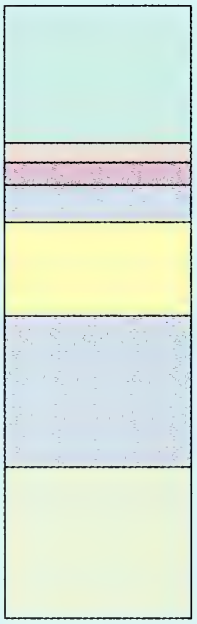
Leading Poultry Meat Importers, 1990

(1,000 metric tons)



Total = 1,539 thousand metric tons

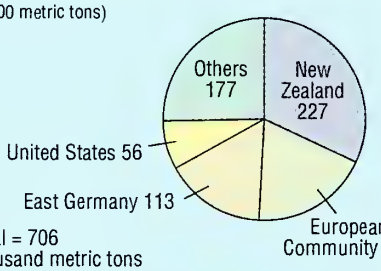
Leading Nations in Cow Milk Production, 1990



Total = 441.0 million metric tons

Leading Butter Exporters, 1990

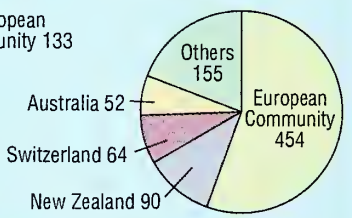
(1,000 metric tons)



Total = 706 thousand metric tons

Leading Cheese Exporters, 1990

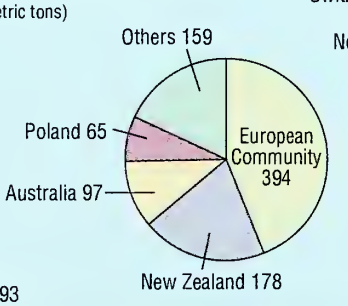
(1,000 metric tons)



Total = 815 thousand metric tons

Leading Nonfat Dry Milk Exporters, 1990

(1,000 metric tons)



Total = 893 thousand metric tons

All data are preliminary. Poultry data are for total poultry meat in ready-to-cook equivalents. Trade totals exclude intra-EC trade. No adjustment is made for transit time, reporting discrepancies, and other factors that result in differences between world export and import totals. East Germany refers to former German Democratic Republic.
Source: Dairy, Livestock, and Poultry Division, Foreign Agricultural Service, USDA.

Leading Export Markets for U.S. Agricultural Products, 1990

	1st	2nd	3rd	4th	5th
All U.S. agricultural commodities U.S. exports: $40.2 billion	Japan $8.11 bil.	Canada $3.71 bil.	USSR $2.99 bil.	S. Korea $2.70 bil.	Mexico $2.67 bil.
	6th	7th	8th	9th	10th
	Taiwan $1.82 bil.	Netherlands $1.64 bil.	Germany $1.10 bil.	Spain $991 mil.	China $909 mil.
Feed grains & products U.S. exports: $9.0 billion	1st	2nd	3rd	4th	5th
	Japan $2.02 bil.	USSR $1.85 bil.	Mexico $963 mil.	S. Korea $700 mil.	Taiwan $626 mil.
	6th	7th	8th	9th	10th
	Netherlands $306 mil.	Spain $290 mil.	Saudi Arabia $206 mil.	Portugal $162 mil.	Algeria $150 mil.
Soybeans & products U.S. exports: $5.3 billion	1st	2nd	3rd	4th	5th
	Japan $849 mil.	Netherlands $616 mil.	Taiwan $471 mil.	USSR $380 mil.	Spain $348 mil.
	6th	7th	8th	9th	10th
	Mexico $297 mil.	S. Korea $210 mil.	Canada $193 mil.	Germany $183 mil.	Pakistan $169 mil.
Wheat & products U.S. exports: $4.4 billion	1st	2nd	3rd	4th	5th
	USSR $550 mil.	China $544 mil.	Japan $467 mil.	Egypt $444 mil.	S. Korea $240 mil.
	6th	7th	8th	9th	10th
	Pakistan $185 mil.	Algeria $159 mil.	Philippines $131 mil.	Taiwan $124 mil.	Venezuela $113 mil.
Live animals & meat (excluding poultry) U.S. exports: $2.8 billion	1st	2nd	3rd	4th	5th
	Japan $1.49 bil.	Canada $364 mil.	Mexico $287 mil.	S. Korea $105 mil.	France $87 mil.
	6th	7th	8th	9th	10th
	Ireland $59 mil.	Belgium-Luxembourg $52 mil.	United Kingdom $50 mil.	Taiwan $28 mil.	Hong Kong $24 mil.
Cotton & linters U.S. exports: $2.7 billion	1st	2nd	3rd	4th	5th
	Japan $564 mil.	S. Korea $455 mil.	China $290 mil.	Indonesia $168 mil.	Italy $165 mil.
	6th	7th	8th	9th	10th
	Germany $144 mil.	Thailand $115 mil.	Egypt $97 mil.	Taiwan $96 mil.	Hong Kong $84 mil.
Fruits & preparations U.S. exports: $2.2 billion	1st	2nd	3rd	4th	5th
	Canada $718 mil.	Japan $526 mil.	Hong Kong $130 mil.	Taiwan $120 mil.	United Kingdom $94 mil.
	6th	7th	8th	9th	10th
	France $61 mil.	Germany $60 mil.	Netherlands $51 mil.	Mexico $47 mil.	Singapore $38 mil.
Vegetables & preparations U.S. exports: $2.1 billion	1st	2nd	3rd	4th	5th
	Canada $732 mil.	Japan $328 mil.	Mexico $144 mil.	United Kingdom $89 mil.	Hong Kong $58 mil.
	6th	7th	8th	9th	10th
	Germany $42 mil.	Taiwan $41 mil.	Bahamas $37 mil.	Saudi Arabia $35 mil.	Australia $27 mil.

(continued on next page)

Leading Export Markets (continued from previous page)

	1st	2nd	3rd	4th	5th
Hides & skins U.S. exports: $1.8 billion	S. Korea $766 mil.	Japan $474 mil.	Canada $133 mil.	Taiwan $117 mil.	Mexico $91 mil.
	6th	7th	8th	9th	10th
	Italy $39 mil.	Romania $21 mil.	France $19 mil.	Hong Kong $18 mil.	Algeria $14 mil.
Tobacco (unmanufactured) U.S. exports: $1.4 billion	1st	2nd	3rd	4th	5th
	Japan $262 mil.	Germany $212 mil.	Netherlands $111 mil.	Hong Kong $93 mil.	Taiwan $77 mil.
	6th	7th	8th	9th	10th
	Spain $77 mil.	United Kingdom $56 mil.	Thailand $51 mil.	Dominican Republic $48 mil.	Italy $47 mil.
Feeds & fodders U.S. exports: $1.0 billion	1st	2nd	3rd	4th	5th
	Japan $329 mil.	Netherlands $183 mil.	Canada $155 mil.	Iraq $56 mil.	Spain $37 mil.
	6th	7th	8th	9th	10th
	France $36 mil.	Mexico $28 mil.	Ireland $27 mil.	Portugal $26 mil.	United Kingdom $21 mil.
Poultry & products U.S. exports: $877 million	1st	2nd	3rd	4th	5th
	Canada $166 mil.	Japan $149 mil.	Hong Kong $102 mil.	USSR $81 mil.	Mexico $65 mil.
	6th	7th	8th	9th	10th
	Romania $32 mil.	Singapore $29 mil.	Leeward-Windward Islands $26 mil.	S. Korea $23 mil.	Jamaica $19 mil.
Rice U.S. exports: $829 million	1st	2nd	3rd	4th	5th
	Iraq $100 mil.	Saudi Arabia $79 mil.	Mexico $62 mil.	Peru $52 mil.	Canada $45 mil.
	6th	7th	8th	9th	10th
	Turkey $44 mil.	Haiti $36 mil.	South Africa $34 mil.	Belgium-Luxembourg $34 mil.	Jordan $31 mil.
Tree nuts U.S. exports: $742 million	1st	2nd	3rd	4th	5th
	Germany $166 mil.	Japan $109 mil.	Canada $58 mil.	United Kingdom $47 mil.	Netherlands $41 mil.
	6th	7th	8th	9th	10th
	France $38 mil.	Spain $38 mil.	Switzerland $22 mil.	Italy $22 mil.	USSR $17 mil.
Seeds U.S. exports: $574 million	1st	2nd	3rd	4th	5th
	Italy $101 mil.	Mexico $94 mil.	Saudi Arabia $60 mil.	Canada $52 mil.	Japan $46 mil.
	6th	7th	8th	9th	10th
	France $28 mil.	Netherlands $27 mil.	Spain $21 mil.	United Kingdom $14 mil.	Argentina $11 mil.

Data are for fiscal year 1990 (Oct. 1, 1989, to Sept. 30, 1990) and include U.S. commercial and concessional exports. U.S. exports to the Netherlands, a major transshipment port, include a substantial value for products consigned to the Netherlands but actually destined for other countries. Data for Germany do not include U.S. exports to the former East Germany. Tobacco exports do not include cigarettes, cigars, and other manufactured products. U.S. exports of solid wood products, valued at $6.5 billion in calendar 1990, are not included in the above data.

Source: Agricultural economist Cecil W. Davison, Economic Research Service, USDA.

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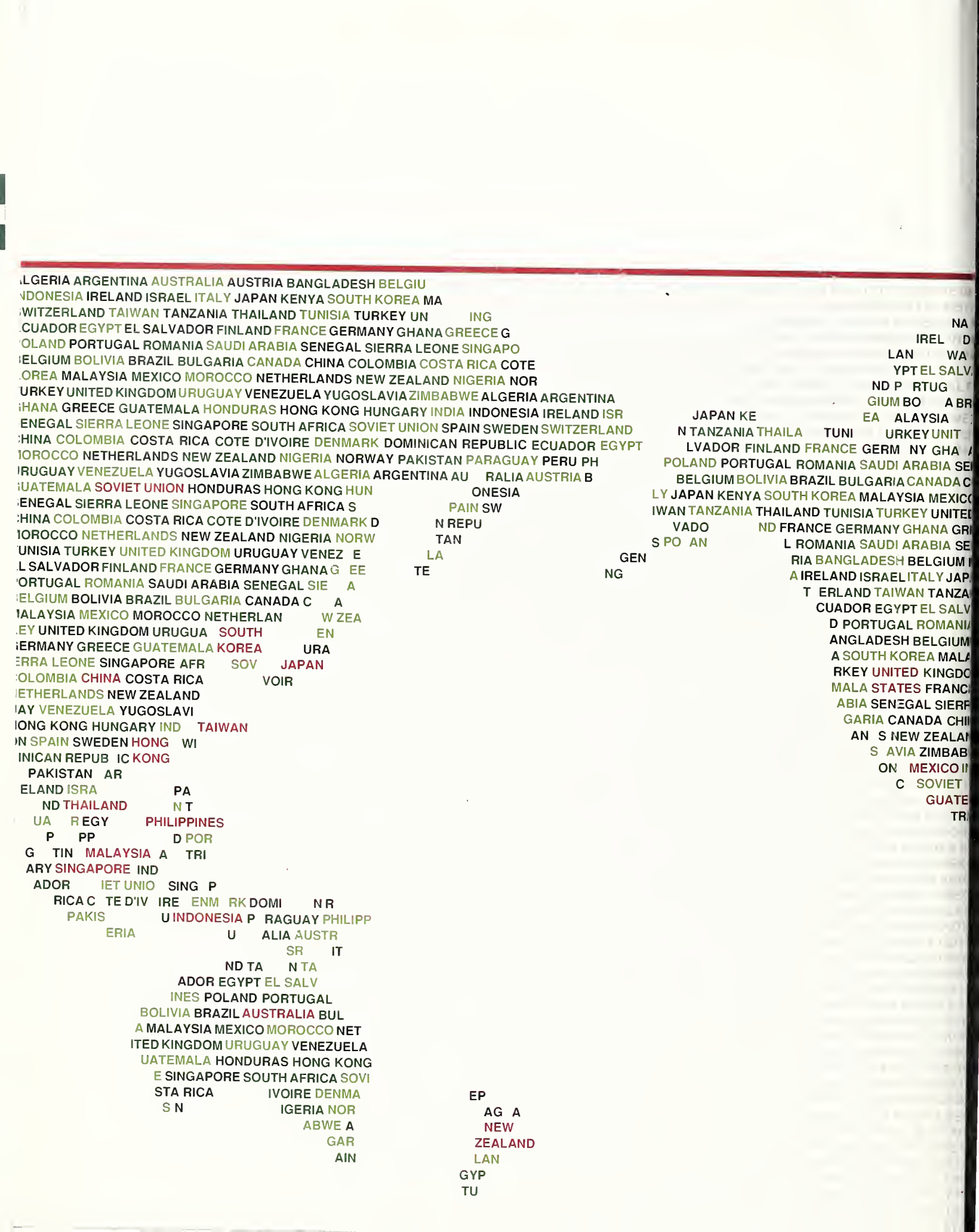
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